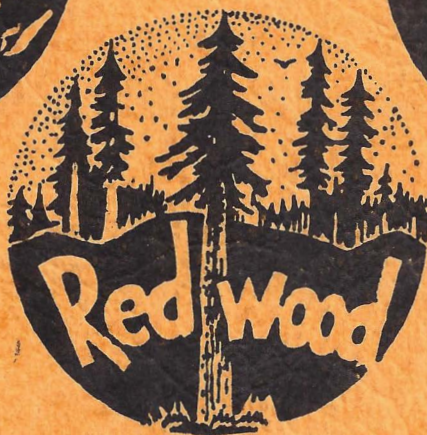
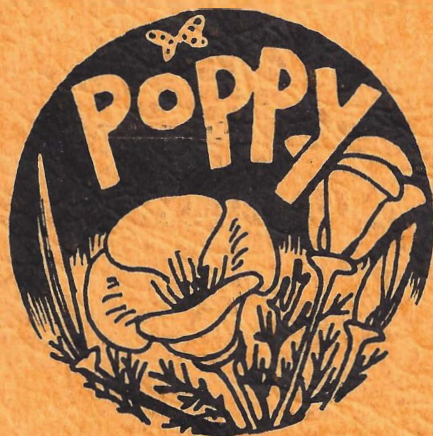


CALIFORNIA TREASURES



Museums Affiliated with Public Schools

 San Francisco
School Volunteers

THE UNIVERSITY OF CHICAGO

LIBRARY



THE UNIVERSITY OF CHICAGO

LIBRARY

CALIFORNIA TREASURES

Curriculum Workbook
presented by

MUSEUMS AFFILIATED WITH PUBLIC SCHOOLS

Funded by a grant from the
National Endowment for the Humanities
Division of Elementary and Secondary Education Programs

PROJECT DIRECTOR
EDITOR

Gail Evenari

PROJECT COORDINATOR
Diana Sullivan

EDITORIAL AND CLERICAL
ASSISTANT
Deborah Ogden

CONTRIBUTING EDITORS AND WRITERS

Diane Butler
Marge Crawford
Robert Flasher
Richard Glauber
Lois Gordon
Barbara Henry
Bea Hocker
Holly Holtz
Robert Kirby
Bruce Kleinschmidt
Steve Knotek
Judith Lynch
Ralph Maradiaga

George Martinez
Mia Monroe
David Nettell
Doris Ober
Brandy Pound
Lynn Rankin
Maureen Rogers
Eric Saul
Marilyn Sugarman
Nora Wagner
Patricia Welsh
Ron Wogaman
Robert Whyte

CONTRIBUTING ARTISTS

Betty Silverman

Jeannette Young

CALIFORNIA TREASURES

TABLE OF CONTENTS

✓ Introduction-----	1
Special Looking Games-----	5
Rainbow - Not a Melting Pot / Finger Puppets of America-----	6
Alcatraz Island-----	8
Asian Art Museum-----	16
Cable Car Barn and Museum-----	22
California Academy of Sciences - Wattis Hall of Man-----	28
De Young Museum - Art-----	47
✓ De Young Museum - Africa Oceania and the Americas Gallery-----	59
Exploratorium-----	72
✓ Fire Department Museum-----	79
Fort Point National Historic Site-----	84
Galeria de la Raza-----	94
Josephine Randall Junior Museum-----	100
Mexican Museum-----	114
✓ Mission Dolores-----	127
Museo Italo Americano-----	132
National Maritime Museum - Hyde Street Pier-----	138
Oakland Museum-----	145
✓ Presidio Army Museum-----	157
✓ San Francisco Examiner-----	163
✓ San Francisco Museum of Modern Art-----	173
San Francisco Zoological Society-----	183
Strybing Arboretum-----	191

Mathematical Induction

Prove that

$$1 + 2 + 3 + \dots + n = \frac{n(n+1)}{2}$$

for all natural numbers n . (Base Case: $n=1$)

Assume true for $n=k$. Prove for $n=k+1$.

$$1 + 2 + 3 + \dots + k + (k+1) = \frac{k(k+1)}{2} + (k+1)$$

$$= \frac{k(k+1) + 2(k+1)}{2} = \frac{(k+1)(k+2)}{2}$$

Therefore, the statement is true for $n=k+1$.

By the principle of mathematical induction, the statement is true for all natural numbers n .

Q.E.D.

Example: Prove that $2^n > n$ for all natural numbers n .

Base Case: $n=1$, $2^1 = 2 > 1$. True.

Assume true for $n=k$, i.e., $2^k > k$.

Prove for $n=k+1$, i.e., $2^{k+1} > k+1$.

$$2^{k+1} = 2 \cdot 2^k > 2 \cdot k > k+1$$

Therefore, the statement is true for $n=k+1$.

By the principle of mathematical induction, the statement is true for all natural numbers n .

Q.E.D.

Example: Prove that $1 + 2 + 3 + \dots + n^2 = \frac{n(n+1)(n+2)}{6}$.

Base Case: $n=1$, $1 = \frac{1(1+1)(1+2)}{6} = \frac{1 \cdot 2 \cdot 3}{6} = 1$. True.

Assume true for $n=k$, i.e., $1 + 2 + 3 + \dots + k^2 = \frac{k(k+1)(k+2)}{6}$.

Prove for $n=k+1$, i.e., $1 + 2 + 3 + \dots + (k+1)^2 = \frac{(k+1)(k+2)(k+3)}{6}$.

$$1 + 2 + 3 + \dots + k^2 + (k+1)^2 = \frac{k(k+1)(k+2)}{6} + (k+1)^2$$

$$= \frac{k(k+1)(k+2) + 6(k+1)^2}{6} = \frac{(k+1)(k^2 + 2k + 2 + 6k + 6)}{6}$$

$$= \frac{(k+1)(k^2 + 8k + 8)}{6} = \frac{(k+1)(k+2)(k+3)}{6}$$

Therefore, the statement is true for $n=k+1$.

By the principle of mathematical induction, the statement is true for all natural numbers n .

Q.E.D.

IMPORTANT NOTE!

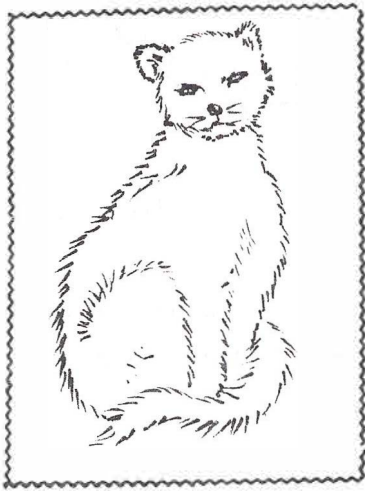
When you come across a word that you do not understand - - STOP!!

- A. Write down the word and the sentence in which it was used.
- B. Look the word up in the dictionary.
- C. Find the definition that makes sense for the sentence you wrote down.
- D. Use the word in several sentences until you feel comfortable and familiar with it.
- E. Go back to the beginning of the paragraph or sentence where you found the new word.
- F. Now continue reading. If you still have trouble understanding, repeat steps B-E or look for another misunderstood word earlier on the page.

CALIFORNIA TREASURES

A TREASURE is something that is worth a lot to you. It may not be worth much money, but it has value to you (and you probably wouldn't want to sell it anyway!).

Can you think of something that belongs to you and nobody else? Something that you would never ever think of selling or giving away (unless it was to a very good friend)?



Maybe it's your dog or cat; or your favorite record album; or your baseball mitt? Maybe it's a memory of your first birthday party or the first time you played in the snow?



Maybe when you finish with this workbook, it will be one of your favorite treasures!

Sometimes, telling someone else about one of your treasures makes it even more special.

EXERCISE: Write a few sentences telling about one of your favorite treasures. Draw a picture of it. Read your description to the class and show them what you drew.

CALIFORNIA TREASURES (cont.)

Sometimes when a treasure is very old or very rare, that also makes it special.

Do you have grandparents (or great-grandparents) who live near you? Or do you know some grown-ups older than your parents? What makes them treasures in a different way from your parents and friends?

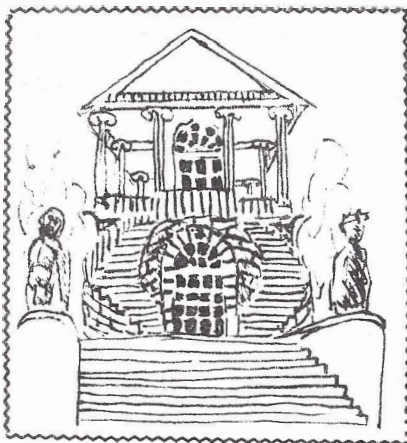
Ever think of a person as a treasure before? Well, why not?



Do you think the things these older friends call treasures are like yours?

EXERCISE: If possible, bring to school one of your treasures and one that belongs (or belonged) to an older friend or grandparent. How are they alike? How are they different? Do you think that when your older friend was your age, he or she might have had a treasure like the one you brought? Why or why not?

Over the next few months, you will be seeing some of San Francisco's most special treasures. Many of them are kept and displayed in MUSEUMS.



A MUSEUM has four important jobs:

1. Collecting things (treasures).
2. Keeping them in good condition.
3. Displaying them.
4. Explaining something about where they came from and why they are thought to be treasures.

CALIFORNIA TREASURES (CONT.)

EXERCISE: See if you can match these words with each of the four jobs that a museum has to do:

INTERPRETATION

EXHIBITION

COLLECTION

PRESERVATION

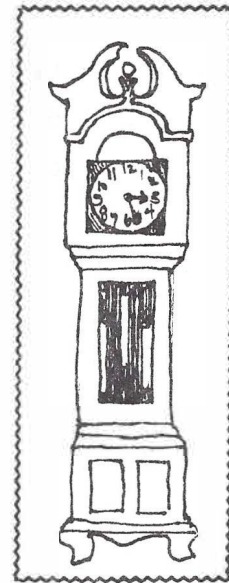
The treasures you will be seeing are kept in museums because they are VALUED. VALUE is an important word to understand. It means what something or someone is worth. Sometimes the same thing has different value to different people.

After a very dry summer, a farmer places great value on a rainy day. For a family that wants to go on a picnic in the park, the same rainy day has no good value. Instead, it ruins their fun.

An autograph of a famous ball player might be of value to a sports fan, but to someone else it is really just another signature.

EXERCISE:

1. Name two things you value that your teacher or parent might not. Explain your choices.
2. Name two things that might be of value to your teacher or parent, but not to you. Explain your choices.
3. Now name two things that might be of value to all of you (to almost everyone?). Explain your choices.



Each of the San Francisco Bay Area treasures you will be seeing and learning about is valued for different reasons.

CALIFORNIA TREASURES (cont.)

EXERCISE: For each of the places described below, tell a study partner why you think the things it collects (and displays) might be thought of as treasures. Then have him/her tell you another reason:

1. C.A. THAYER - Three-masted sailing schooner built in 1895. She sailed the Pacific Coast as a logging and later a fishing ship. (HYDE STREET PIER)
2. WATTIS HALL OF MAN - The Hall shows eleven different cultures. It mainly tells how man survives in so many kinds of environments (surroundings, weather, etc.) and displays some of the different ways of living humans have created. (CALIFORNIA ACADEMY OF SCIENCES)
3. SAN FRANCISCO ZOOLOGICAL SOCIETY (S.F. ZOO) - Many different kinds of animals live at the zoo, including some endangered species and California wildlife.

Now you are about to begin an adventure - your CALIFORNIA TREASURES adventure. You will discover more about things that are already familiar to you. You will also learn about things that are totally new to you.

Most important of all - you'll be having FUN!!

SPECIAL "LOOKING" GAMES

I. PRIVATE EYE

1. Pick a partner.
2. Describe the way he/she looks, including as many details as you can.
3. Close your eyes while your partner changes one or two things about his/her appearance.
4. Describe your partner again and see if you can find the changes.
5. CAREFUL! Your partner may trick you and not change anything. You've really got to LOOK and SEE!
6. Now switch and your partner becomes the "private eye."

II. ROUND-ROBIN

1. Form a group of 3-5 students.
2. Pick a picture of a painting from this book or from another book.
3. Take turns (Round-Robin) naming the details in the picture.
You can only name one detail each turn. No repeats allowed!

III. DIFFERENT CAN BE FUN

1. As a class (or as a group of a few students) pick a painting from this book or from another book.
2. On your own, write a story about the painting.
3. Compare your story with others in the class or group.
4. Notice how different people can see the same work of art differently.
DIFFERENCES COME FROM THE VIEWERS' PAST EXPERIENCES AND BACKGROUND.



RAINBOW - NOT A MELTING POT

Our country is made up of people of many different cultures. America is great because there are so many different kinds of people.

America has been called "the melting pot of the world." That means many different people are thrown into one pot and are kind of molded into one type of person.

Try this exercise and maybe you can start to think of America as a RAINBOW instead of a MELTING POT.

EXERCISE:

Materials: White paper cut into arched shapes, water colors, brushes

1. Take one color and paint the whole paper with it.
2. Pick another color and paint over the whole paper.
3. Do the same thing with two or three more colors.

What does your paper look like?

If each color stands for a culture or a group of people - can you tell the groups apart? Why or why not?

What do you think it means to say, "America is like a rainbow."

Maybe one thing it means is that people of different cultures can live side by side without everyone being the same.

4. Take another piece of the arched paper, pick one color and paint it as a stripe starting at one edge and going to the other edge.
5. Pick another color and paint it next to the first one - in a stripe.
6. Do the same with other colors - until the paper is covered with stripes.

What does your paper look like?

Which paper is better for being like America? Why?

FINGER PUPPETS OF AMERICA

All of the fingers on your hand are necessary for the hand to work well. In the same way, all the different peoples of America are necessary for her to become truly great.

Here is an exercise to make this idea even clearer to you.

EXERCISE: Origami Finger Puppets

Materials: origami paper, scrap yarns, scissors, stapler and felt pens.

1. Look at the fingers of your hand. Notice how each finger is important if the hand is to be totally efficient (working well). Each finger has its own special uses and all of them working together make the hand a very helpful tool.

QUESTION: What are some things you can do with your hands?

2. Now let's say that the hand stands for America with the fingers being its people. Think of all the different people living here.

QUESTION: How many of the different kinds of people living in America can you name? See if you can think of at least one group of each color skin: red, yellow, black, brown, white. If you need help - ask your teacher or find a book in your school library.

3. Now make a Finger Puppet to stand for each color group:
 - a) Roll origami paper into tube and staple.
 - b) Fold down top for head.
 - c) Draw in a face and clothing with felt pens.
 - d) Add yarn hair.
 - e) Puppets should be of yellow, red, white, black and brown origami paper.
4. Put one puppet on each of your fingers. See how pretty they all look together.

QUESTION: What does that tell you about the people of our country?

5. Make up a play using your finger puppets.

ALCATRAZ ISLAND

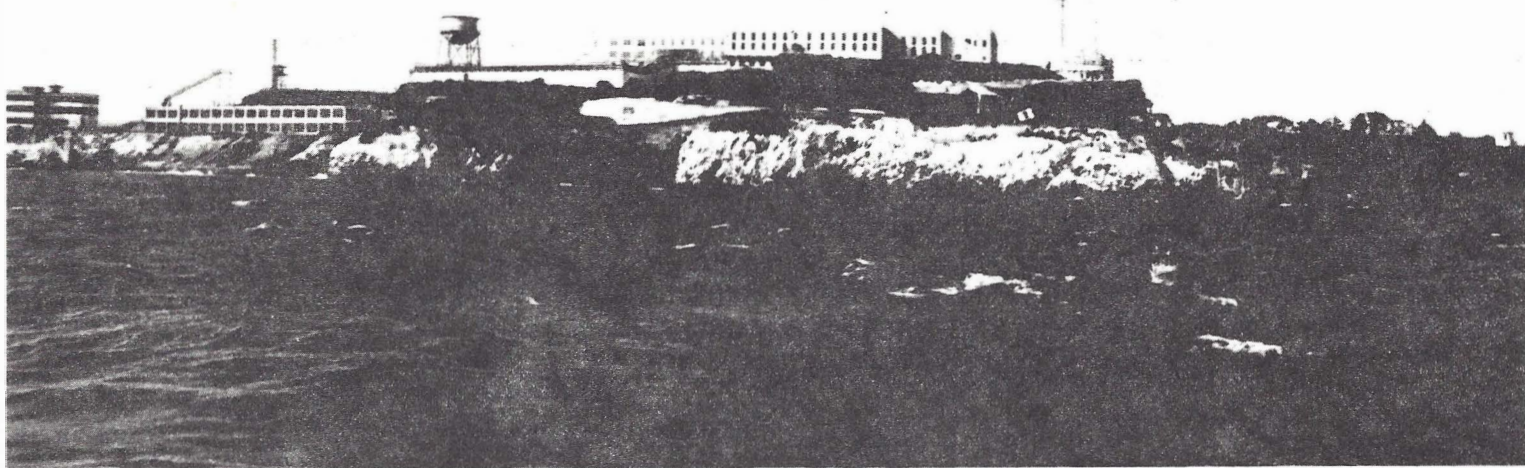
Before you read about Alcatraz Island, learn the meanings of the following words by

- 1) looking each word up in the dictionary
- 2) using each word in made-up sentences until you feel comfortable with it.

civil
cormorants
federal

maximum
minimum
pacifist

penitentiary
privilege
security



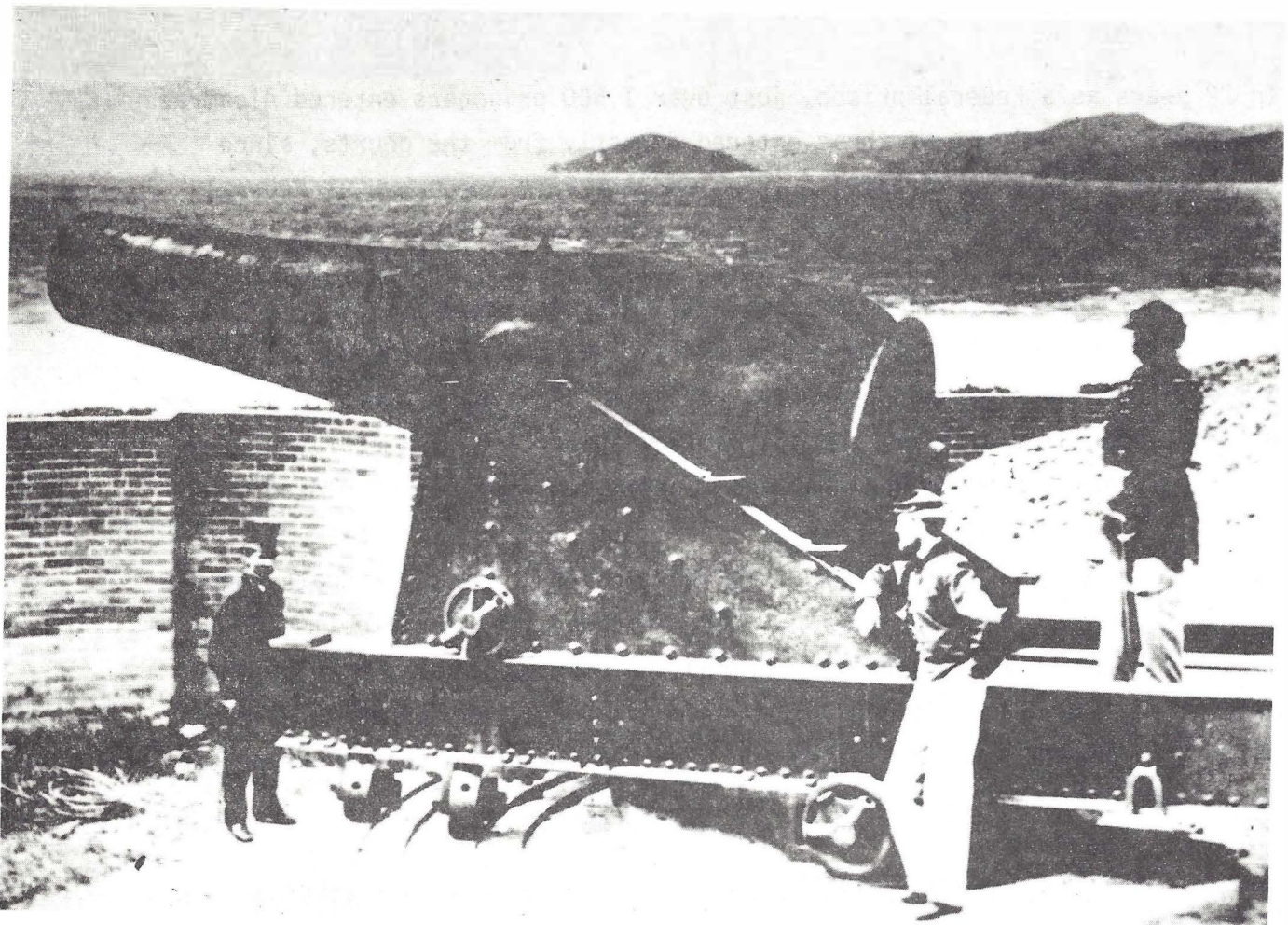
Alcatraz Island, known through the years as "The Rock," lies in front of the San Francisco waterfront one mile out in the San Francisco Bay. It is three miles east of the Golden Gate. Don Juan de Ayala, Lieutenant of the Royal Spanish Navy, entered San Francisco Bay in 1775. Although the island was sighted and recorded on a map, it was not named at this time.

Alcatraz Photo Credits:
NATIONAL PARK SERVICE

The name Isla de los Alcatraces (Island of the Pelicans) had been given to what is now known as Yerba Buena Island (between Oakland and San Francisco). British sailors entering San Francisco Bay several years later misread Spanish charts and called the unnamed island Alcatraces by accident.

An unsheltered (almost treeless) sandstone rock used for roosting and nesting by seagulls, cormorants and pelicans, the island remained undisturbed until it was chosen as the site for a lighthouse and fort to be built by the United States Army. The fort was completed in 1858. Alcatraz was first used as a prison during the Civil War. Between 1870 and 1900, American Indian prisoners, military prisoners and pacifists were held on Alcatraz Island.

EXERCISE: Draw a picture and write a short story about how Fort Alcatraz and the soldiers there protected San Francisco.



The San Francisco Earthquake of 1906 shook "The Rock" and damaged some buildings. During the chaos that followed the quake, the prisoners from city jails were brought to Alcatraz. Troops from Fort Alcatraz were sent to the city to assist in policing duties.

The present main prison building and many of the surrounding buildings were constructed between 1906 and 1912. In 1907, Fort Alcatraz received a new title as "The Pacific Branch of the U.S. Military Prison".

In 1934, Alcatraz began operating as a maximum security, minimum privilege male penitentiary for the hard-core gangsters and criminals of the time. It has been one of the most well-known prisons of its time. The fog-shrouded institution, normally two-thirds filled, had enough space for 400 prisoners. It housed such criminals as Al Capone, "Machine Gun" Kelly, "Doc" Barker, Albert Bates, Alvin Karpis, Roy Gardner, Mickey Cohen, Robert "Birdman" Stroud, and Morton Sobell.

In 29 years as a Federal prison, just over 1,500 prisoners entered Alcatraz Penitentiary. Only 5% of these entered directly from the courts, since Alcatraz was designed to receive troublemakers from the other 21 Federal penitentiaries.

Thirty-nine inmates tried to escape in 14 separate attempts: 26 were returned to their cells, 7 were shot and killed, one drowned and 5 disappeared. More patient prisoners outlasted "The Rock." Due to the high cost of operating Alcatraz and the falling apart over time of the buildings, it was determined that the Federal penitentiary be closed.

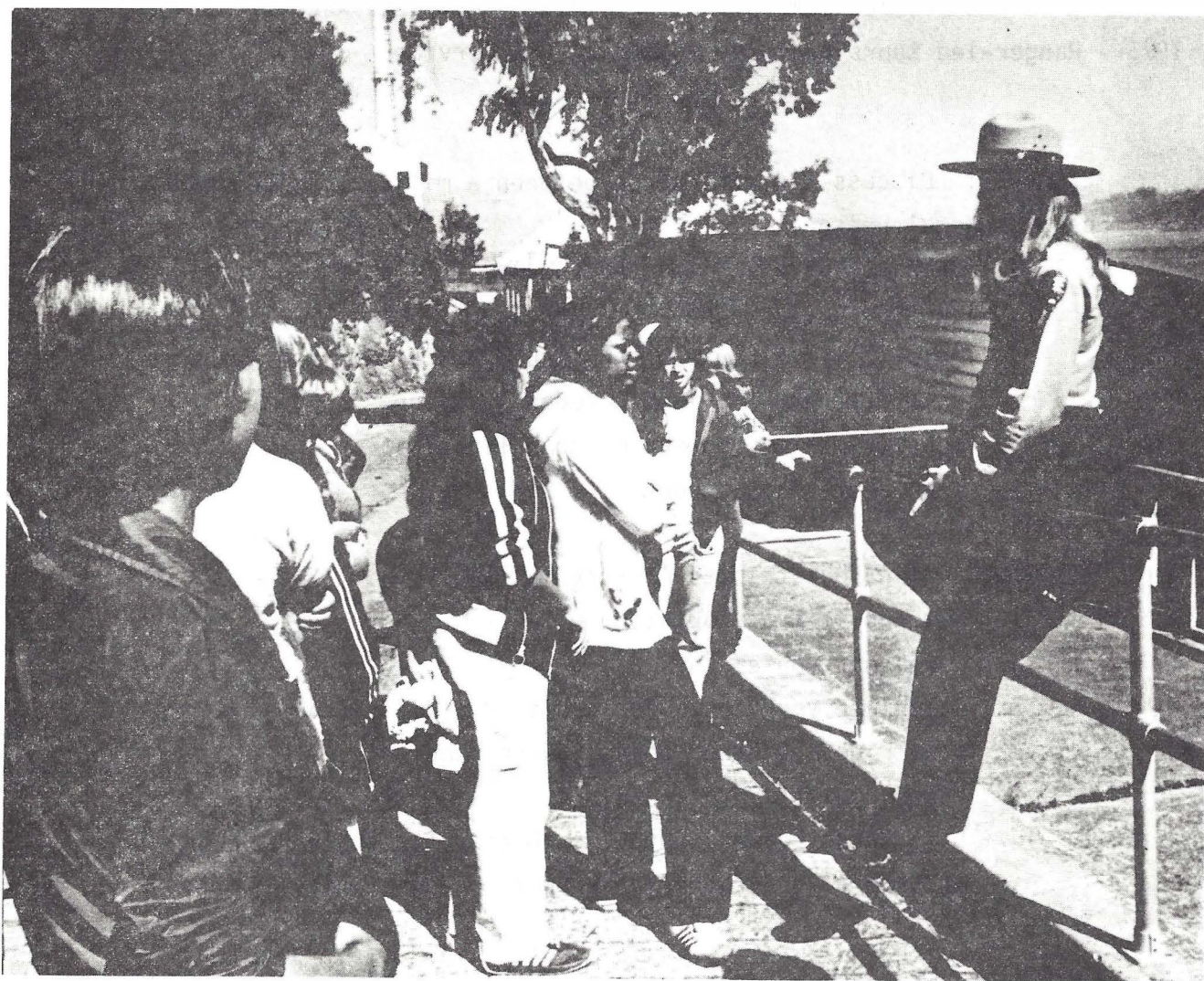
Twenty-seven pale, quiet men, wearing fresh prison blues, pea-coats, handcuffs, leg-irons and waist chains, were released from their cells and herded into buses which slowly descended the narrow, winding road on the steep east side of the island. The prisoners were transferred to a boat, which then headed for the Alcatraz dock at Fort Mason on the San Francisco waterfront. This was on Thursday, March 21, 1963.

So ended 100 years for Alcatraz as a place where soldiers and civilians (non-soldiers) had been confined.

In 1964, a president's committee recommended that Alcatraz be a special place to remember the founding of the United Nations in San Francisco. No action was taken on this proposal. Federal and California government agencies both said, in 1968, that they did not wish to own the island.

About 100 Indians of all tribes occupied and claimed the island in November of 1969. Their desire was to establish a cultural center on the island. The Indians were removed in March of 1971.

A bill establishing the Golden Gate National Recreational Area, including Alcatraz as a unit, was signed into law by President Nixon in 1972.



CHRONOLOGY (TIME TABLE) OF EVENTS

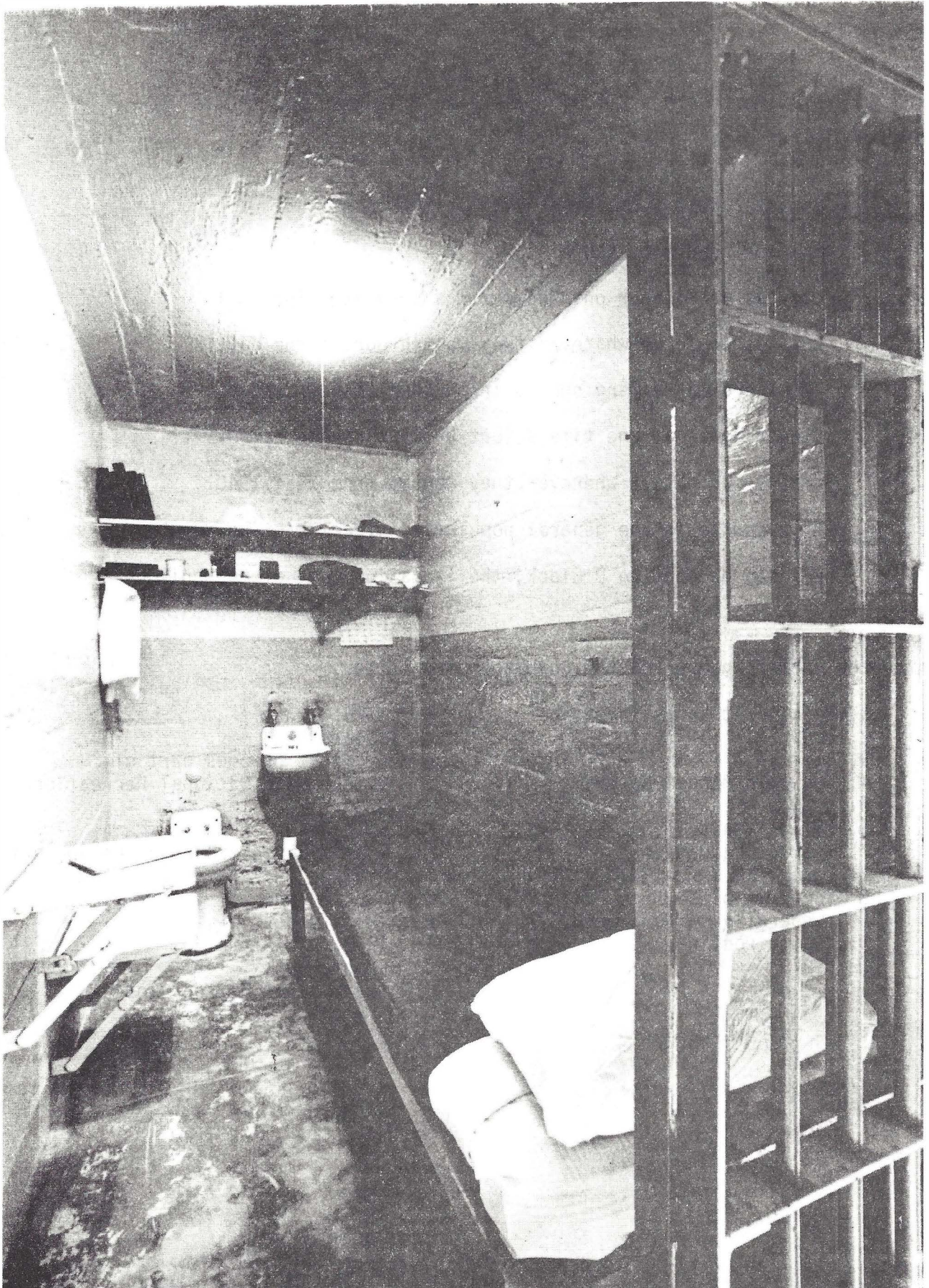
- 1775 - Spanish settlement; Bay is mapped out.
- 1849 - Gold Rush
- 1850 - Alcatraz taken by the Federal Government; Fort Alcatraz established.
- 1861-1865 - Civil War
- 1860's - First prisoners on Alcatraz held by military.
- 1909-1911 - Present cellhouse built.
- 1934 - Alcatraz becomes a Federal penitentiary.
- 1963 - Federal prison closes.
- 1969-71 - Indian occupation.
- 1972 - Alcatraz becomes part of the Golden Gate National Recreation Area.
- 1973 - Ranger-led tours begin by National Park Service.

EXERCISE: Discuss the difference between a military prison and a civil federal prison.

1. Make a list of crimes that would get a soldier a prison sentence.
2. Make a list of crimes that would get a civilian (non-military person) into a federal prison.
3. How many crimes appear on both lists?
4. What crimes appear on one list? Why?

EXERCISE: Plan your trip to Alcatraz Island.

1. Use public transportation.
2. Plan your route.
3. Calculate your costs for public transportation, the boat ride and other costs (lunch, souvenirs, etc.)
4. Make a map of your route.
5. List three reasons why it is better for you to take public transportation rather than ride in your family car.



POST-VISIT

ALCATRAZ ISLAND

Mark each statement with a "T" if you think it is true and "F" if you think it is false.

1. _____ Inmates could smoke cigarettes in their cells.
2. _____ Inmates read many books.
3. _____ Life as a prisoner on Alcatraz was very exciting.
4. _____ Inmates could do whatever they wanted during the day.
5. _____ There are man-eating sharks in the San Francisco Bay.
6. _____ Alcatraz was at one time a fort protecting the harbor.
7. _____ Inmates could talk whenever they wanted from 1934-1940.
8. _____ If an inmate in the general population of cells broke a rule,
he would be sent to D Block, the isolation unit of the prison.

Match the correct number to the corresponding letter.

- | | |
|-------------------------------------|---|
| _____ 1. Working at an assigned job | A. 1775 |
| _____ 2. 1849 | B. 1934-1940 |
| _____ 3. Pelican | C. Alcatraz becomes part of |
| _____ 4. Don Juan Manuel de Ayala | Golden Gate National Recreation |
| _____ 5. 9:30 p.m. | Area. |
| _____ 6. Silent Years | D. Gold Rush |
| _____ 7. Indian Occupation | E. A trouble maker and/or escape artist |
| _____ 8. March 21, 1963 | F. Showers |
| _____ 9. Incurrigible | G. A privilege |
| _____ 10. Generally twice a week | H. "Alcatrazes" |
| _____ 11. Daily routine | I. 1971 |
| _____ 12. 1972 | J. Lights out |
| | L. The Federal Prison closes |

POST-VISIT

EXERCISE: All visitors to the prison spoke to the inmates over telephones that were monitored (listened to) by guards. If the conversation drifted from family matters the guard would cut off both parties and send the visitor home and the inmate back to his cell.

In this activity one student role-plays the visitor and the other plays the part of an inmate. Someone else plays the part of a guard. The inmate and visitor sit on opposite sides of the table. The guard listens to the conversation. If the inmate and visitor mention anything not relevant to "family matters" the guard cuts off the conversation and the two visitors return to their seats.

*Special note - The guards must listen carefully for possible verbal codes or trick messages. Prison rules were strict about not allowing any conversation about current events, crime or prison routine.

Make sure you have a turn at playing the inmate, visiting relative and guard.

EXERCISE: All letters from the prisoners were rewritten by the guards so that security inside the prison could be tight. This created many frustrating problems.

This activity may reveal some of those frustrations.

The roles are the same as in the above exercise. Each prisoner writes a one-page letter to a classmate who represents a family member. All completed letters are given to the guards, who rewrite them before they are passed on to the family member.

ASIAN ART MUSEUM

The Asian Art Museum of San Francisco is the only museum in the United States that is just for the arts of Asia. The original collection was given to the City and County of San Francisco by a man named Avery Brundage. It has been added to by gifts from others and by museum purchases supported by money donations.

There are over 10,000 objects in the museum from all over Asia. The objects are grouped under these headings: China, Korea, Japan, India, the Himalayas, Southeast Asia and the Near East. They cover 5,000 years of Asian history.

An IMAGE is an imitation, copy or representation of a person or thing.
It can be drawn, painted or sculpted.

The image of Buddha changed as it traveled from country to country in Asia.
Artists in India, China and Japan were all making statues of Buddha and
each of the Buddhas was different.

The form of the Buddha was changing. The design of all the parts of the
Buddha and how it was put together changed. There was a body and there were
the symbols of Buddha, but each country had its own idea of beauty, its own
style, its own materials.



"LIKE MAGIC HIS IMAGE APPEARED BEFORE YOU"

You are a magician! You can create images with words, and images with pictures, and images with symbols.

People loved and respected the Buddha. To honor him they often made images of him.

Now - you create an image of someone you respect, someone you admire, maybe someone you would like to be like. (The person could be a hero from California history.)

EXERCISE: PICTURE IMAGE

Materials: large sheet of construction paper, crayons or colored markers, magazines, scissors, glue, paper scraps

1. Draw an image of the person you chose.
2. Cut it out and paste it on a large piece of construction paper.
3. On some smaller scraps of paper, draw symbols or picture ideas of the things that remind you of that person. (For example: if the person you admire is your teacher, perhaps draw an open book, a smiling mouth, etc.)
4. Now cut out the symbols and paste them around the image you have already placed on the page. You have created a picture image and a symbolic image of your chosen person.
5. Now with a few well-chosen words, create a written image of your person.

How to select your words: Think of and write down 12 words that immediately come to your mind when you think of the person. For example, if you chose the president, these words might be among your choices: decision-maker, powerful, intelligent, thoughtful. Whatever are the 12 words you select, pick eight or nine of them to be written on the background around the picture image you have already drawn (and the symbols).

6. Save your picture. You will need it for a project after your visit to the museum.

EXERCISE: Understanding and Use of Symbols

Think of an animal you like or admire. Draw this animal or find a good image of it in a magazine and cut it out.

1. What is this animal like? Find three words to tell everyone and write them down.
2. Now use these words and the animal they describe to make sentences describing something else.

Example: The goodness of the Buddha is as strong as a lion.

Do other people use images of this animal to try and sell you things? Think of packages in the grocery store with pictures of this or other animals on the outside. What is being sold on the outside of the package?

Example: Ford Motor Company uses a mustang (horse) to sell one of its cars.

Do you remember any animals used to describe the Buddha and his life? Which ones were they?

Animals and plants are also used by artists when they paint or sculpt images of the Buddha. Remember how:

The body of the Buddha is slender like the body of a lion.

The shoulders of the Buddha look like the head of an elephant.

The legs of the Buddha are like those of a deer.

The eyes of the Buddha are shaped like lotus petals.

The lips of the Buddha are full like a mango.



EXERCISE: CHINESE HANGING SCROLL

Chinese scrolls are decorations (drawn or painted) that can be rolled up or hung on a wall. You are going to make the image you have created into a scroll so you can hang it up and others can admire it.

MATERIALS: Paper towel cardboard tubes or dowels of some kind, string or ribbon, large piece of paper (larger than the construction paper in the other exercise).

1. Paste the image you created onto the larger piece of paper.
2. Roll and paste the top and bottom of the paper around the cardboard tubes or dowels.
3. Put a string or ribbon through the tube (or tack it if you have a dowel that isn't hollow).
4. Hang your art work on the wall and wait for everyone to look at it. Meanwhile, you can look at the other ones in the class.



JOURNEYS WE TAKE - SHAPES AND PATTERNS WE SEE

Many patterns that were designed in Asia were brought to the United States through trade. China introduced many beautiful shapes and patterns to other parts of Asia, to Europe and to the United States in its ceramics, its vases and dishes.

Do you remember any of the interesting shapes and patterns you saw in the Asian Art Museum? Which ones?

EXERCISE: Now in your imaginary Land of Shape and Pattern - design your own pattern for a plate. The pattern can be repeated or not. It can be real or imaginary things (dogs, dragons, lines). Consider also the possibility of a plate with a border pattern.

EXERCISE: Printing a Pattern with a Styrofoam Engraving

Materials: styrofoam meat trays (the largest size you can find), pencil, scissors, block printing ink (thick tempera paint will do, if necessary), rollers (for ink), glass or plastic surface for inking the rollers
18" x 24", newspaper, paper for printing on

1. Cut the largest circle you can from the styrofoam tray.
2. Trace the outline of your tray on a practice piece of paper.
3. Draw your design on the paper.
4. With pencil, copy your design onto styrofoam plate. Take care not to cut through styrofoam with pencil.
5. Squeeze ink onto glass and push roller back and forth in ink.
6. Push roller over drawn surface of styrofoam tray.
7. Place printing paper directly on top of styrofoam plate, then place extra sheet of newspaper on top to prevent tearing.
8. Apply pressure with the palm of your hand. Remove paper and print is complete.

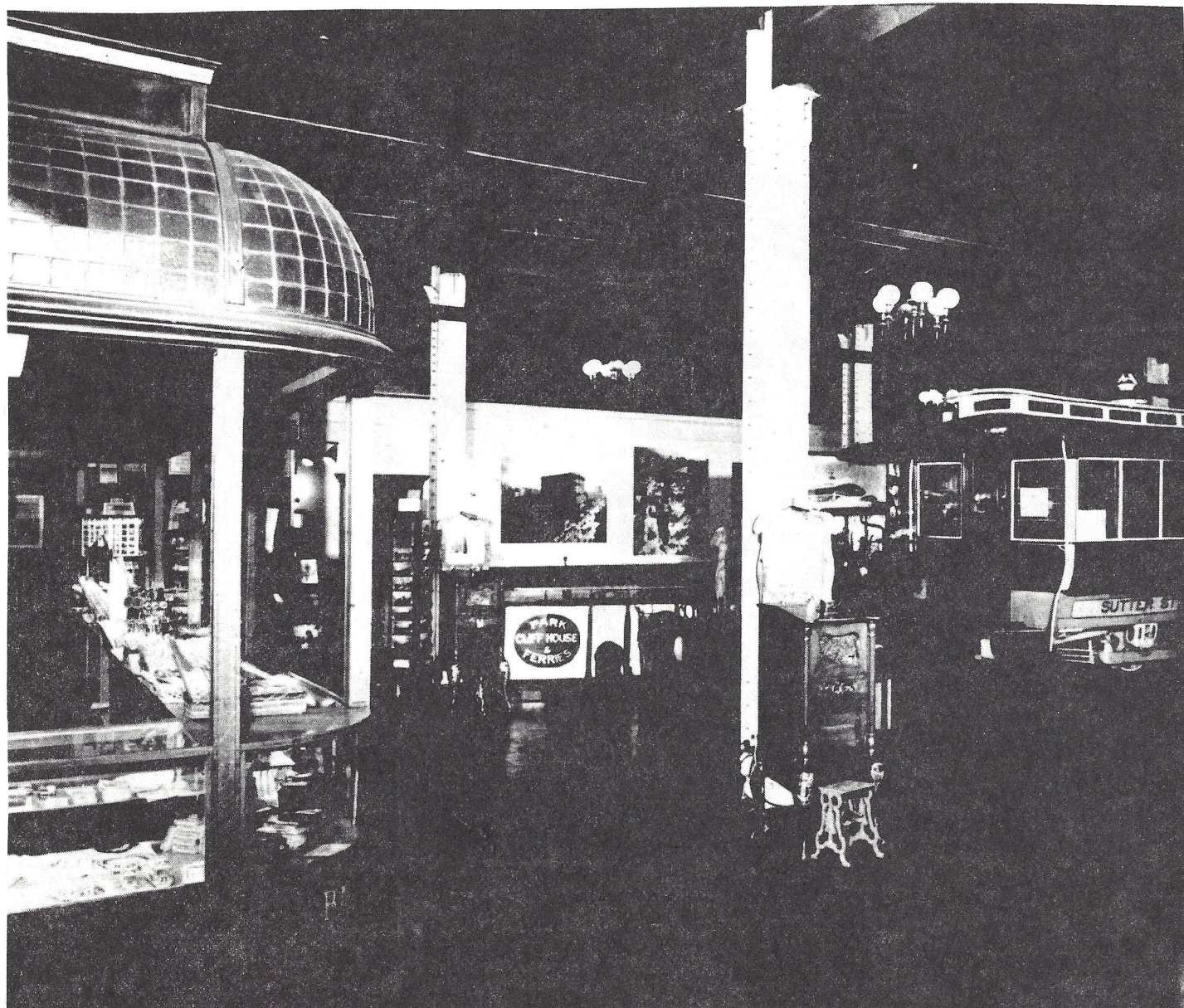
CABLE CAR BARN AND MUSEUM

The Cable Car Barn and Museum is in the same building as the working powerhouse that operates the cables of the California, Hyde and Powell and Mason lines. Cable cars took the place of horse carts on the steep hills of San Francisco beginning in 1873. Much of the Cable Car Barn was destroyed in the 1906 earthquake, but was rebuilt and was operating again in about a year. The city of San Francisco has been in charge of the cable cars since 1944. The Cable Car Museum is owned and operated by the Pacific Coast Chapter of the Railway and Locomotive Historical Society.



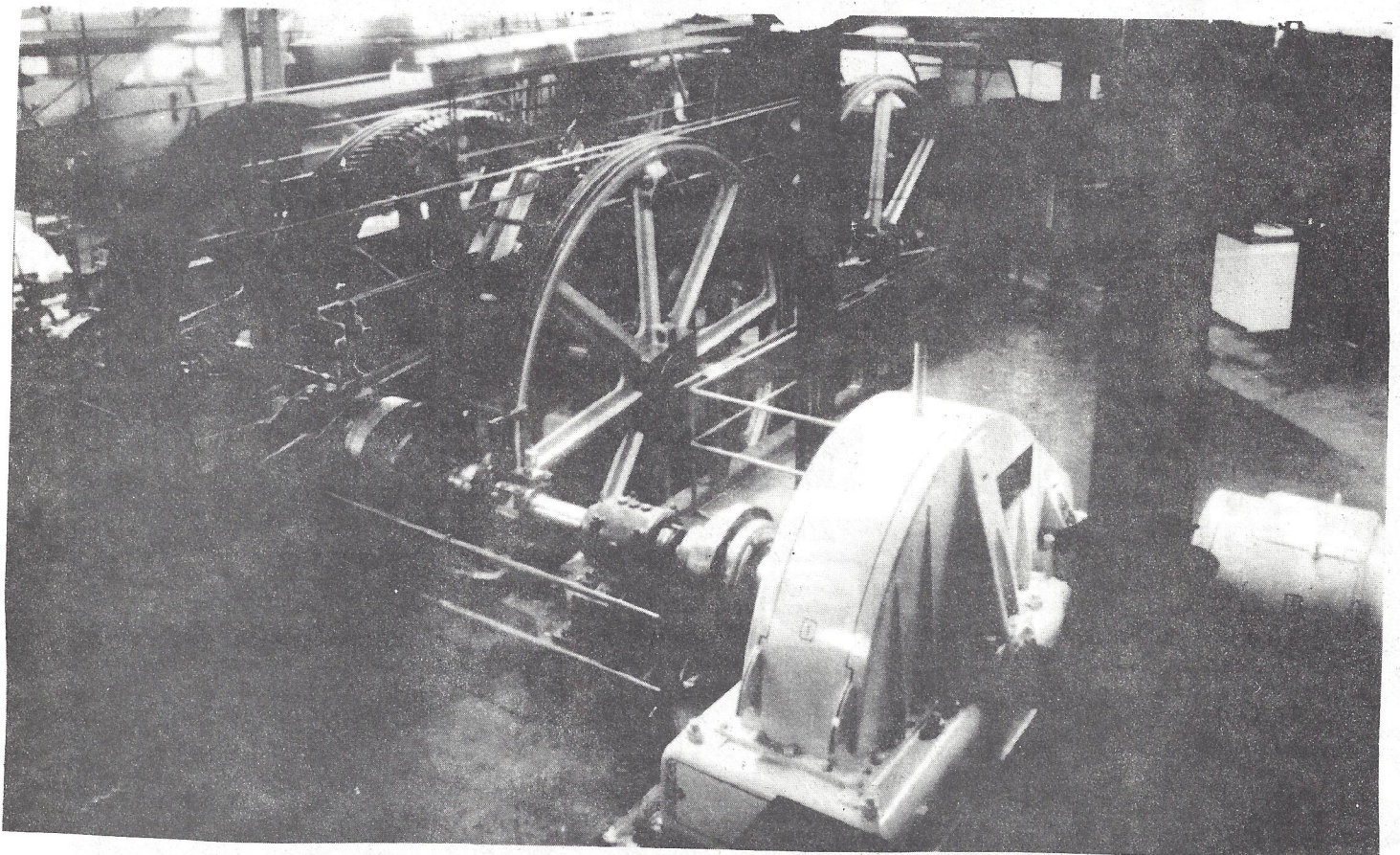
Cable Car Barn and Museum

Of special interest in the museum is the balcony view of the cables being drawn in and out of the powerhouse on the huge winders. The museum has many displays of actual cable cars, small models, photos of the history of cable cars in San Francisco, maps and charts. The museum gift shop is located in a concession stand (sales counter) that was once in the Southern Pacific Railroad San Francisco station.



CABLE CARS - HOW THEY WORK

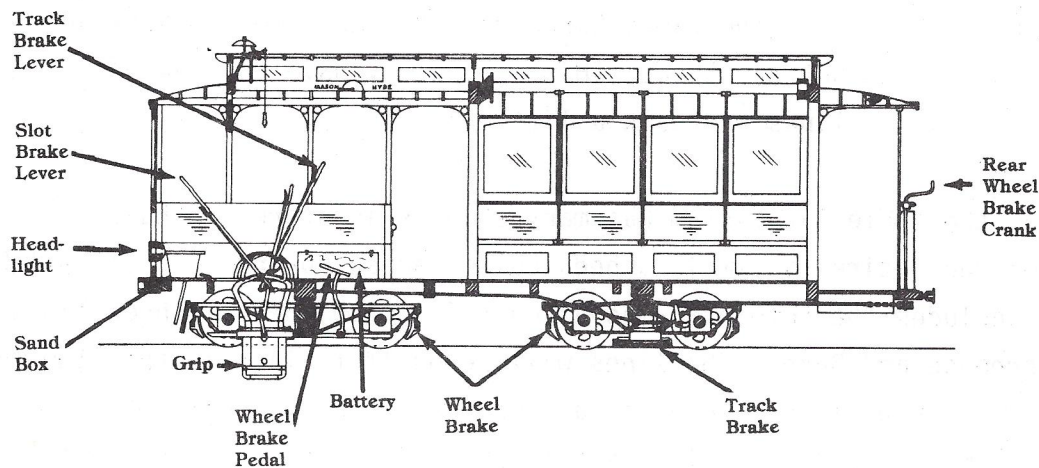
The Cable Cars are pulled by a constantly moving 1¼ inch steel cable, which travels underground in a conduit (pipe or channel) at 9 miles per hour. The system uses three cables, one for Powell and Mason Streets, one for Hyde Street, and one for California Street. Each cable is endless; it is joined onto itself in a big circle. The cables are driven by the 14-foot winders of the cable winding machinery, which is powered by a 700 horsepower motor (see picture below). The machinery is a 1965 copy of the original 1887 set.



On the cable car is a grip, which passes through a slot between the rails to grip the cable. When the gripman pulls back on the lever on the top of the grip, two jaws at the bottom of the grip gradually close like a vise on the cable, and the car is pulled forward. The gripping parts, called dies, are made of soft steel and must be replaced about once a week in normal use.

cable cars - how they work (continued)

Each car has four independent braking systems- 1) the track brakes, 24-inch long blocks of soft pine which push down on the rails and wear out every 2 to 4 days; 2) the wheel brakes, cast iron "shoes" which press on the car's wheels, as in full-size railroad equipment; 3) the cable itself, since when the grip is fully tightened around the cable ("full grip"), the car cannot go faster than the cable's speed of 9 miles per hour; and 4) the slot brake, a steel wedge driven by springs into the slot, stopping the car immediately. It is controlled by the red lever next to the grip in front of the car and is used only in emergencies. Sometimes cutting torches are needed to remove it from the slot.



EXERCISE: Make a drawing of a cable car. Use the picture above to help you know what it should look like. Make sure to include and label each of the following parts: grip, track brake, wheel brake, headlight, bell.

Explain to a study partner why each of those parts is important in making cable cars safe for people to ride.

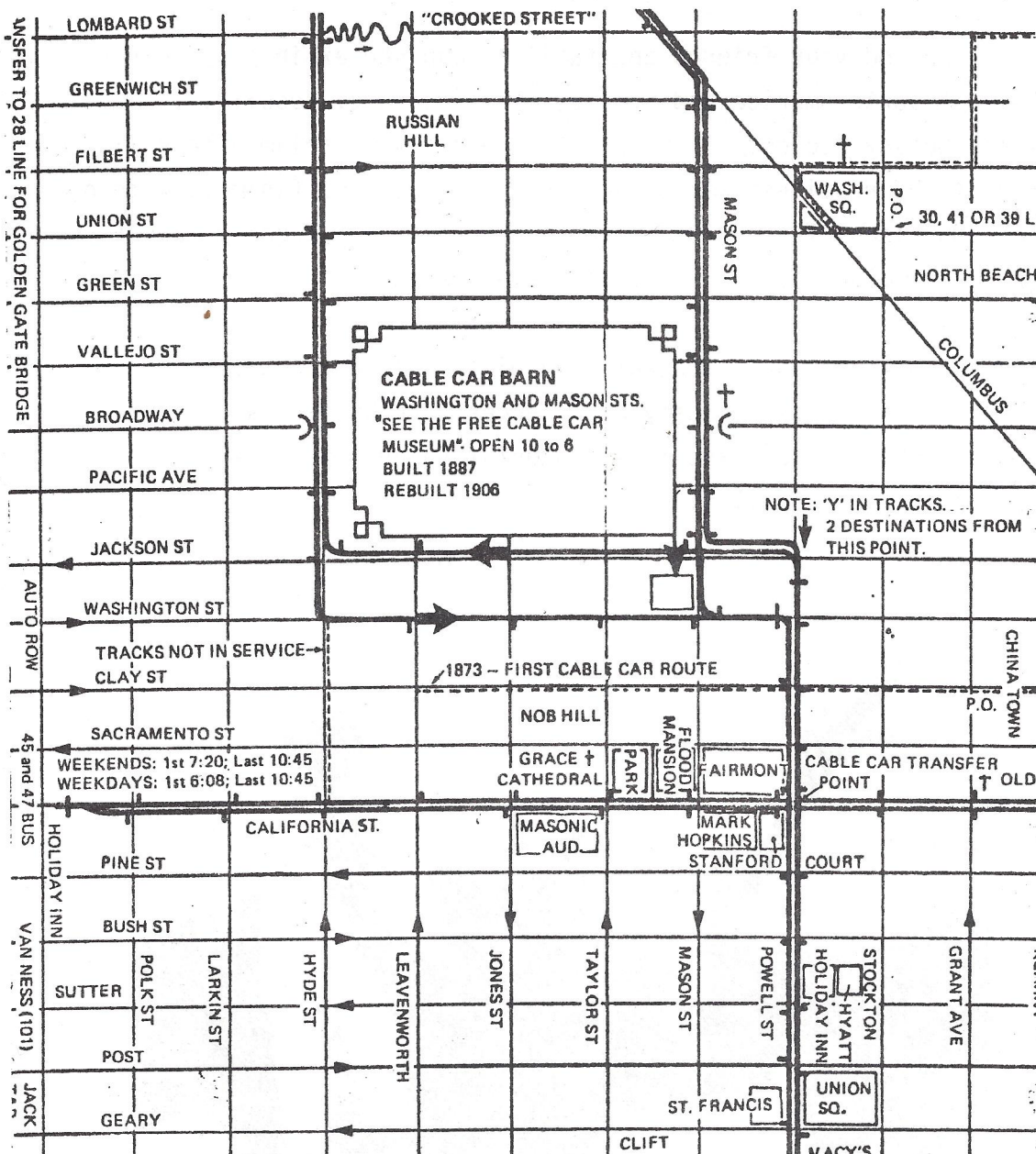
EXERCISE: There are $10\frac{1}{2}$ miles of cable in the whole cable car system. How many feet is that? (Hint: one mile = 5280 feet)

EXERCISE:

1. Draw and then cut out a small cable car (about 2-3 inches long).
2. Using the map of San Francisco show a study partner how you would travel:
 - a) from the corner of Bush St. and Polk St. to the Fairmont Hotel on California St. and Mason St.
(Don't forget! You may have to walk a couple of blocks to get to the cable car line.)
 - b) from Union Square to the "Crooked Street" (Lombard Street).
 - c) from the Cable Car Barn and Museum to Van Ness and Sutter Street. (Hint: You may have to change lines and walk a little!)

The future of the Cable Car system has many changes in store. A huge rebuilding of the entire system is scheduled to happen during the years 1982 to 1984. This includes the complete renovation (fixing up) of all three lines and the Powerhouse and Barn. The lines will be built to last another 100 years and the Barn will be modernized and made earthquake-proof. The original brick walls outside will stay the same. The cost will be about \$50,000,000.

EXERCISE: If you were the mayor of San Francisco, would you go ahead with these plans to completely rebuild the cable car system? Write your answer down, including all your reasons. Read it to the class. Did anyone change their minds after hearing your point of view?



Map Credit:
JOHN TOBAISSON

CALIFORNIA ACADEMY OF SCIENCES

The California Academy of Sciences, founded in 1853, is the oldest scientific institution in the West. It includes research departments, several collections and a large library.

The public (you and your friends and family!) can see exhibits of birds and mammals of North America and Africa, earth science, fossils, minerals and botany (science of plants). Steinhart Aquarium offers living exhibits of fish, reptiles, amphibians and invertebrates (animals with no backbone). Morrison Planetarium presents programs in astronomy (about stars) and meteorology (about the atmosphere; weather).

For the California Treasures program, you will be learning about a very special part of the Academy of Sciences, the Wattis Hall of Man. In this exhibit hall, there are many wonderful things to see-- just keep reading and you'll find out!



WATTIS HALL OF MAN

Imagine this: One morning you get up to get ready for school. You're having breakfast and you're wondering about what you're going to do today in class. It's just an ordinary day. You get to school and you sit down with all the other kids. And then your teacher tells you that today you're going on a fantastic trip in a fantastic bus that can drive backwards in time!

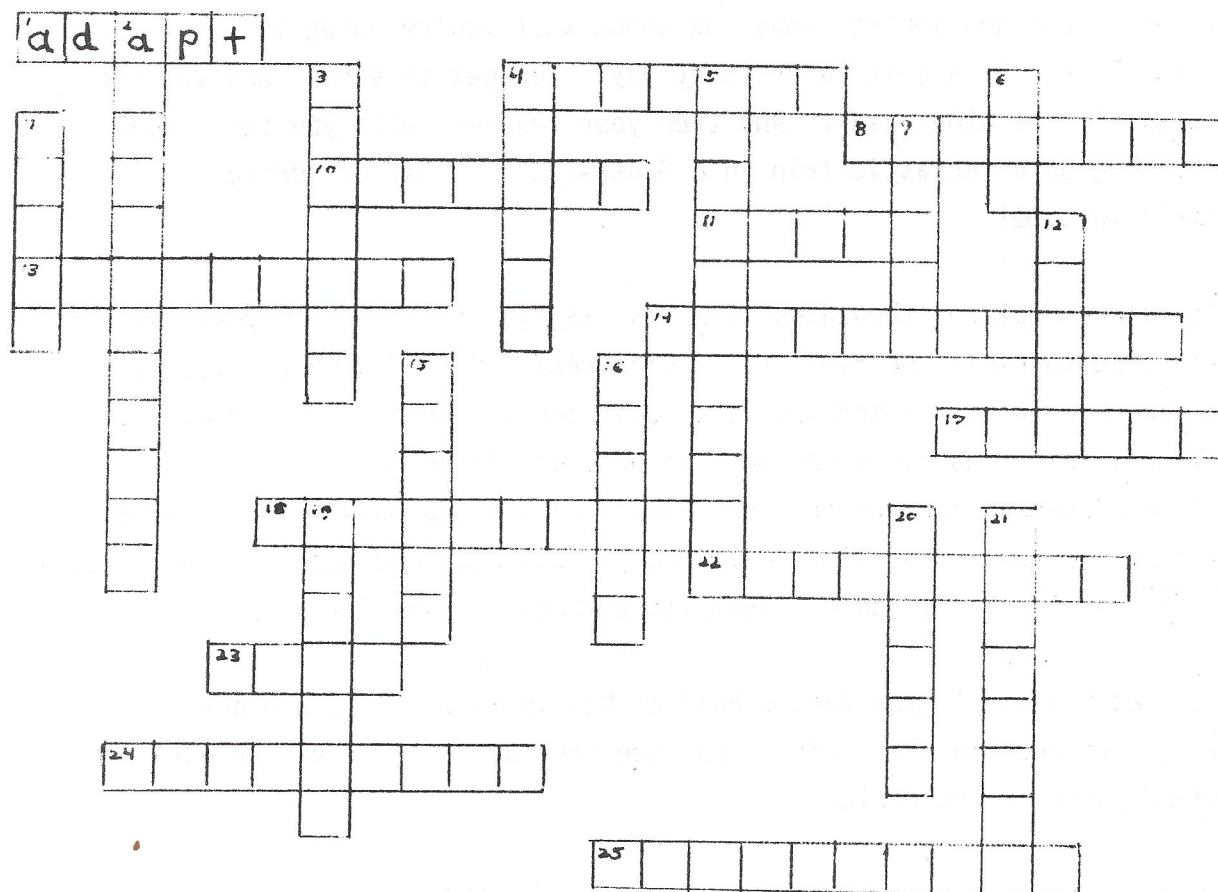
You're going to places thousands of miles away and thousands of years ago. You're going to visit the families of different kinds of people. You'll get to see how they live and what they wear and the sort of food they eat. You'll meet an Eskimo fisherman working outside his igloo. You'll see Japanese farmers in their rice fields and a Navajo Indian woman weaving at her loom. You'll travel through mountains and deserts and icy cold and steamy heat. You'll do all that and be back in time for supper!

That's what a visit to the Wattis Hall of Man is like. It's a place where you can peek in for a minute and see the way people lived in many different parts of the world.

Before we drop in on those far-away people, there are some words you should learn. Look up the meaning of each word in the list below. Then fill in the crossword puzzle on the next page using each new word. Just to get you started, we've already filled in the first answer.

Words to look up:

ABORIGINE	ENVIRONMENT	PUEBLO
ADAPT	IGLOO	REGION
ADOBE	INTERVIEW	RITUAL
ALTITUDE	KACHINA	SOCIETY
ANTHROPOLOGY	KIN	STAPLE
CLIMATE	LOOMS	TEMPERATE
CULTURE	NOMAD	VALUABLE
DATA	OCCUPATION	WEALTH
ENDANGERED	POSSESSIONS	

ACROSS

- 1 Adjust, change to fit a situation
- 4 Community, population
- 8 Height
- 10 Weather
- 11 House for an Eskimo
- 13 A primitive Australian
- 14 Belongings, things owned
- 17 Southwest American Indian Community
- 18 Job, type of work
- 22 Mild, warmish
- 23 Information
- 24 Investigate, ask questions
- 25 Not safe, in danger (of dying)

DOWN

- 2 Study of man
- 3 Hopi Indian religious spirit
- 4 Main or basic food
- 5 Surroundings
- 6 Relatives, family
- 7 Wanderer
- 9 Hand machines for weaving
- 12 Sun-dried brick made from clay
- 15 Religious ceremony
- 16 An area of earth, a place
- 19 Ideas, customs, skills, arts of a given people in a given period
- 20 Riches, valuable possessions
- 21 Having worth, useful, precious

CALIFORNIA ACADEMY OF SCIENCES
WATTIS HALL OF MAN

PRE-VISIT

Now read these short stories about each Wattis Hall culture. Try to imagine one thing in each culture that might have been considered a "treasure" to the people - one thing that was very valuable to them. For example, the Australian Aborigine might have considered their tools to be of great value because they had so few possessions and tools were necessary for hunting, digging and food preparation.

For each of the cultures below, write down one thing society probably thought was very special.

AUSTRALIAN ABORIGINE: Their country is so hot and so dry that not many animals or vegetables can live or grow there. For this reason the Australian Aborigines are nomads who must travel great distances hunting and gathering food. Since they are always moving, the people do not bother to build houses. Because they have no real home, these people have few possessions. They take just what they can carry with them - usually a few tools for hunting and digging and preparing food. One Aborigine tool used for hunting is the BOOMERANG, a curved club which can be thrown so as to return to the hunter.

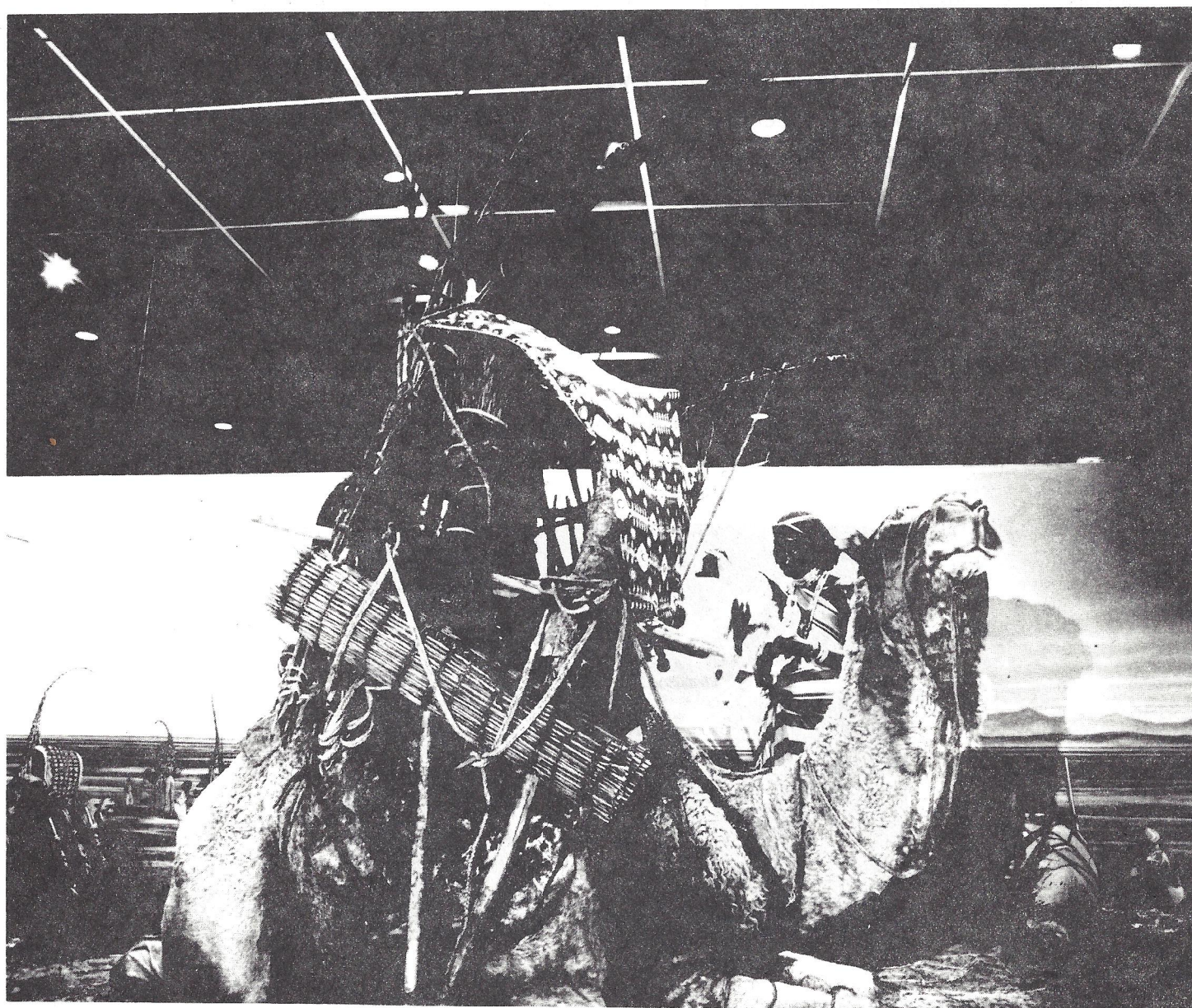
An Aborigine treasure might be: _____

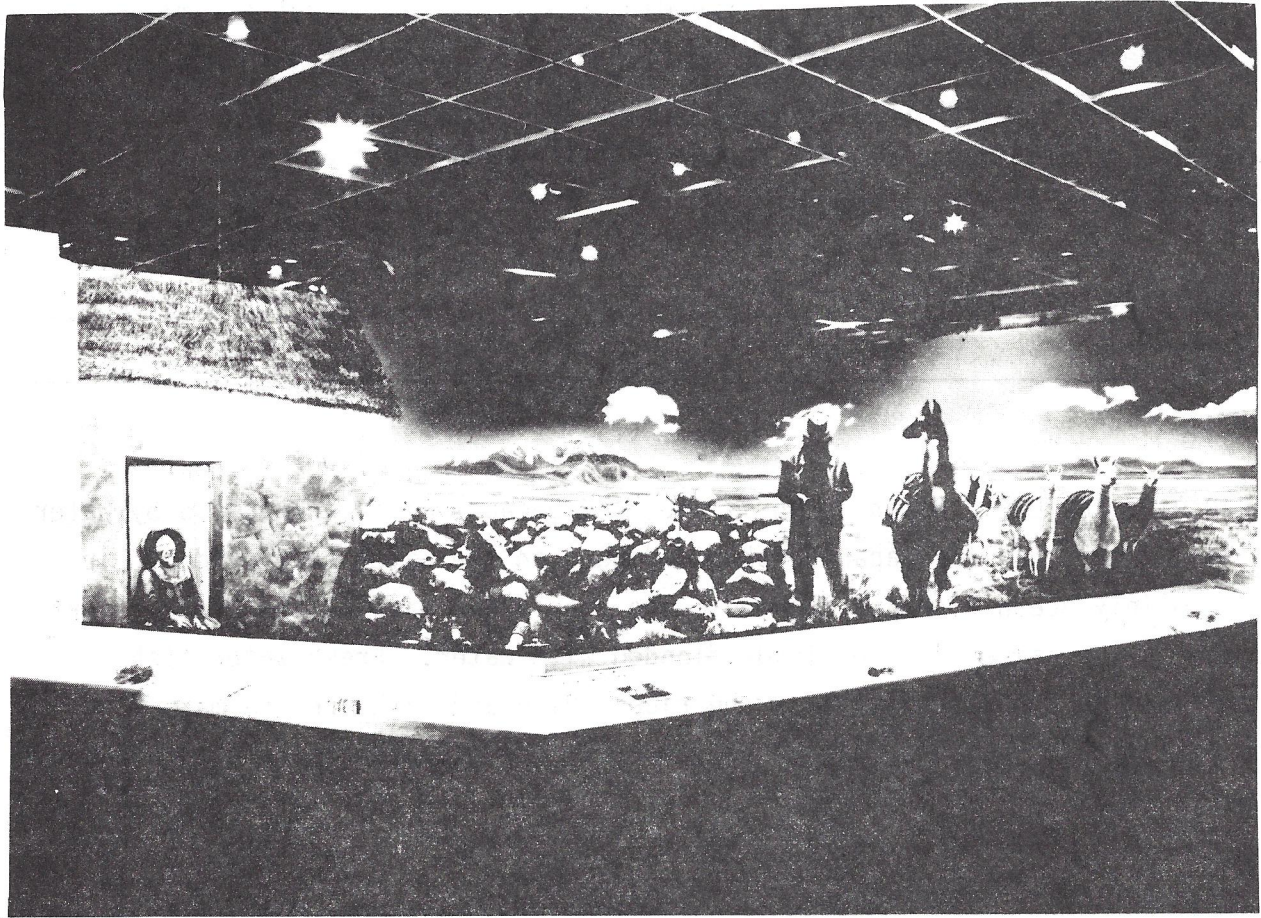


PRE-VISIT

THE GABRA: The Gabra are nomadic herders of cattle, goats, camels and sheep. These herds provide both food and clothing to the tribe. The Gabra are nomads who construct homes for themselves out of stretched animal skins. They pack their house along with their other possessions on camels which can carry great weight. The Gabra live in the desert region of Africa.

A Gabra treasure might be: _____





HERDERS OF THE HIGH ANDES: This society lives in the mountains of South America. In the PUNA ZONE (an open grass area with marshes and cold meadows), LLAMA, ALPACA, VICUNA and sheep are herded. The people also raise potatoes - one of the few foods that can be grown at such a high altitude. In order to have different types of food, the High Andes people often trade animal skins or potatoes with people from the lower regions.

A High Andes treasure might be: _____

PRE-VISIT

CALIFORNIA ACADEMY OF SCIENCES
WATTIS HALL OF MAN

ESKIMOS: Eskimos from the Arctic, called NETSILIK Eskimos and Western Alaskan Eskimos are on display at the Wattis Hall of Man. Both Eskimo tribes are hunters of seals and other sea animals. The Netsilik people live in IGLOOS, houses built from chunks of ice. Alaskan Eskimos build their homes out of wood. Canoes made of animal skin and wood are used for transportation.

An Eskimo treasure might be: _____

JAPAN RICE CULTURE: Japan is an island, and because it is surrounded by water it is natural that the Japanese should depend on the water to provide their food, mainly ocean fish and seaweed. The people who live in the central part of the island raise rice in fields flooded with water. Fresh-water fish are raised in the same fields as the rice. Rice and fish are the main foods, and rice is also used to make straw for mats, rope, baskets, clothing and many other products.

A Japanese treasure might be: _____

MICRONESIA: This tiny group of CORAL ISLANDS can grow just a few different kinds of food. The people use a special type of canoe (an outrigger) to travel among islands trading for different foods. BREADFRUIT is a staple of the island. These islanders trade shells which they use like money. In Micronesia, women are not allowed to work at jobs that have to do with the sea, so they do all the land work and men do the fishing and boating. In this area of the world TYPHOONS (Violent wind and rain storms) cause great hardships for the people.

A Micronesian treasure might be: _____

PRE-VISIT

NEW GUINEA HIGHLANDERS: The New Guinea Highlanders are a group of people whose mountainous island is usually rainy, but not cold. The Highlanders are known most for three major occupations: pig raising, making war on other tribes, and raising sweet potatoes. Although the Highlanders eat sweet potatoes themselves, most of the crop is used to feed the pigs. Pigs are so valuable to this culture that they are like money. Pigs are used for food, trading and rituals. Their bones are used to make tools of different kinds. Wars are started not only to right a wrong, but also to show off a tribe's strength, weapons and bravery.

A New Guinea treasure might be: _____

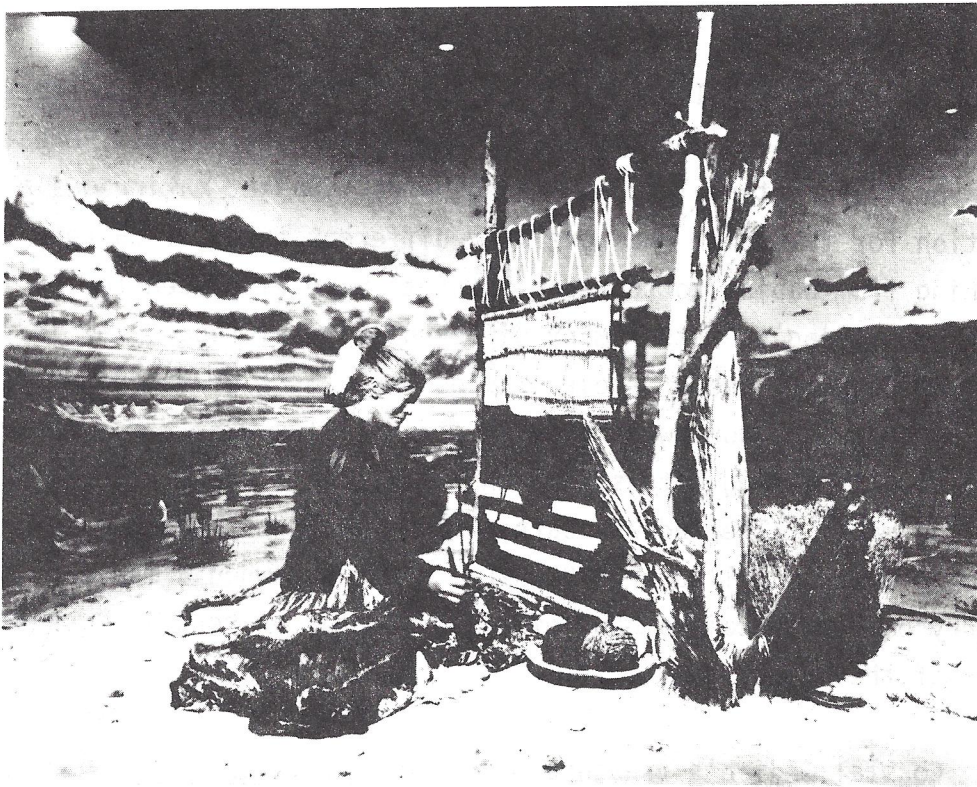
NORTHWEST CALIFORNIA COASTAL INDIANS: These people were hunters, gatherers and fishermen who lived in a mostly wet and temperate environment. Great redwood trees provided material for building homes. Basket making was a major occupation for the women who wove many different types of baskets to carry everything from babies to tobacco. Baskets were also used for serving food and wearing as hats. Many different natural foods grow in this area of California. One of their staples was acorns ground down into a paste-like cereal. The Northwest Coastal Indian males were very concerned about wealth. Shells strung onto string and worn like a necklace was like a pocket full of money. The Indians earned money through trading, gambling, and by what is called a BRIDEPRICE. This was when a man who wanted to marry paid a certain amount of his property or certain possessions to the father of the bride.

A California Coastal Indian's treasure might be: _____

PRE-VISIT

SOUTHWESTERN UNITED STATES INDIANS: Two Southwestern Indian tribes are shown in the Wattis Hall of Man: The NAVAJO, who are herders of sheep, and the HOPI, who are mainly farmers raising corn as well as other vegetables and fruits. Navajo homes are called HOGANS. They are round, dome-shaped buildings. Hopis live in PUEBLOS - like large apartment buildings- usually built from adobe. Indians of both tribes are known for their fine baskets, weaving and jewelry.

A Southwestern Indian treasure might be:

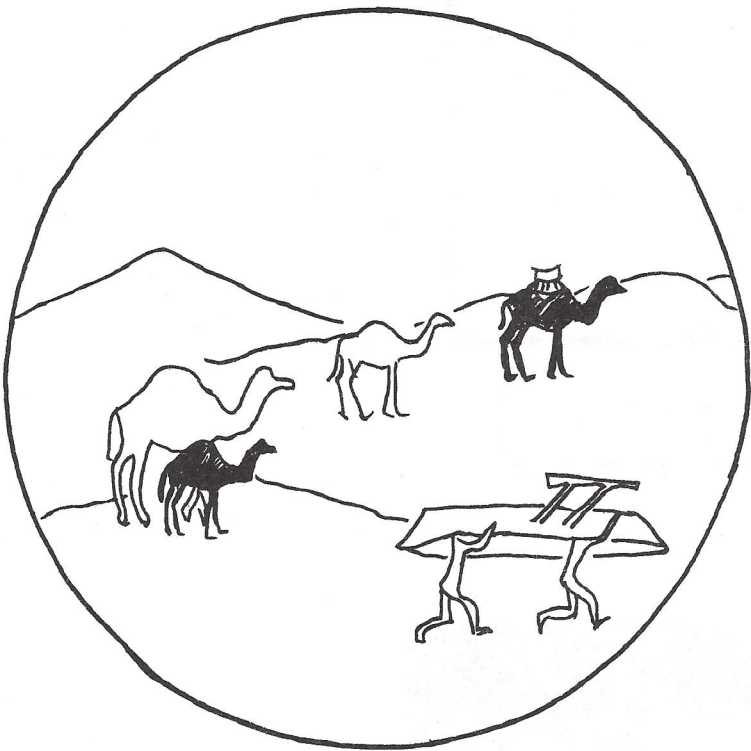


CALIFORNIA ACADEMY OF SCIENCES
WATTIS HALL OF MAN

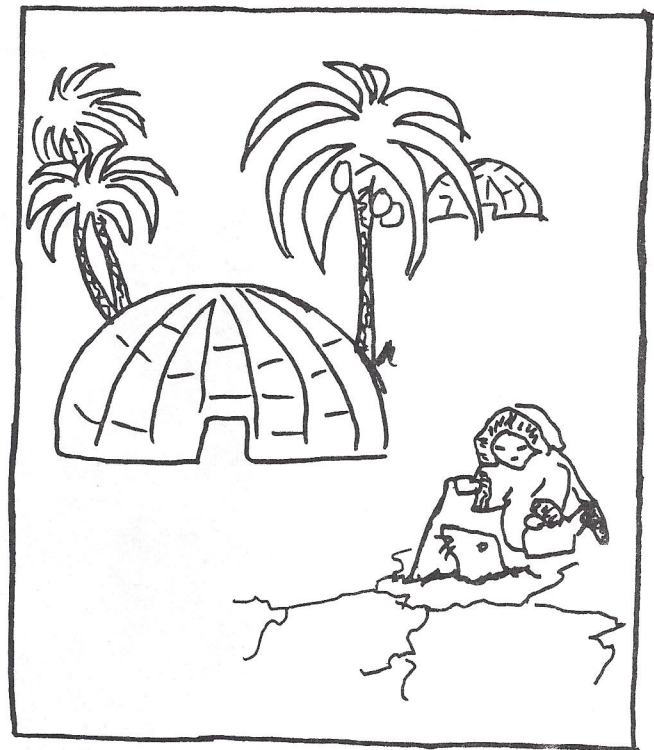
PRE-VISIT

In the Wattis Hall of Man you'll learn a little about how each of these cultures has adapted to each environment. You'll learn something about what each culture believes - their religion, their rules for society. But there are certain things you already know about these cultures - even though you may not know that you know.

The games below will prove that you're smarter than you think you are!



What is wrong with this picture?

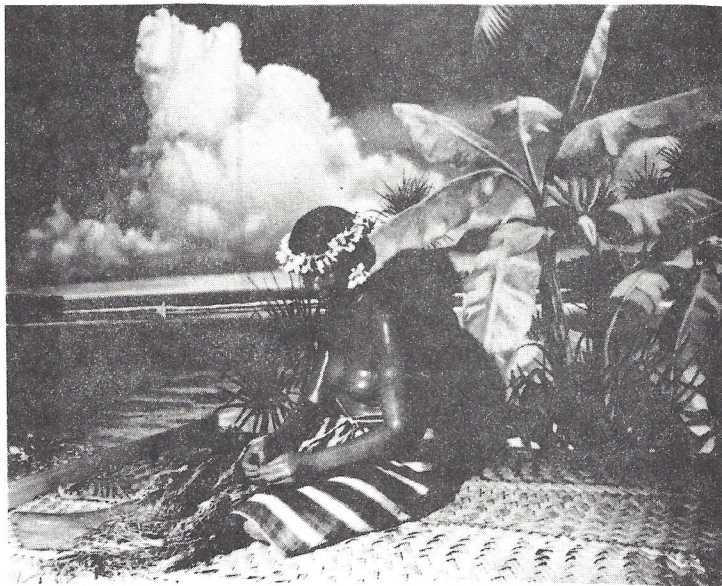


What is wrong with this picture?

Turn the page
for one last game...

- | | |
|--------------|-------------|
| 1 ESKIMO | A CAMEL |
| 2 GABRA | B KACHINA |
| 3 ABORIGINE | C TYPHOON |
| 4 HIGH ANDES | D IGLOO |
| 5 MICRONESIA | E RICE |
| 6 HOPI | F BOOMERANG |
| 7 JAPANESE | G LLAMA |

Match the culture on the
left with the correct
word on the left.



ALL THAT GLITTERS IS NOT GOLD

Here are two words for you to know before you read this page:

adaptation - How man's body and behavior change and adjust
to the environment

environment - everything that combines together to surround an
animal or plant

Whenever a group of people live, the way they live depends on their environment. You would not wear a bear skin coat in the desert. Of course not! First, it is too hot and second, there are no bears from which to make a coat. Instead, you would wear few clothes because of the climate, and the clothes you would wear would be made from the plants or animals that could live in the desert. As a desert dweller, you have adapted to your environment. You took what was available and made it work for you.

How people spend their time is an adaptation to their environment. That is, what people must do with their time and what people can do with their free time depends on the conditions of where they live.

For example, if an environment is difficult... if it is hard to gather food, if it is hard and time consuming to make a home, a person would have little time except to do what is necessary.

On the other hand, the environment can make life easy. The environment of northern California provided an easy life for the Yurok Indians. The climate was not too hot or cold. The weather conditions allowed for fish, animals and plants to live. Therefore, the Indians had much food and a great variety of food. The Yuroks had so much available that they stored and saved the extra. The extra materials were sometimes used for trade. And since life was fairly easy for them, they had free time. They used their free time to make items of value (like shell necklaces), to make collections, and to trade for what they considered valuable

Why did the Yuroks value the woodpecker headdress, the shell necklaces, the obsidian (a special kind of glass)? Why is an object considered valuable?

EXERCISE: Write down as many reasons as you can think of for why an object is valuable. (Hint: some examples of reasons might be that the object is - hand-made, beautiful, rare, etc.)

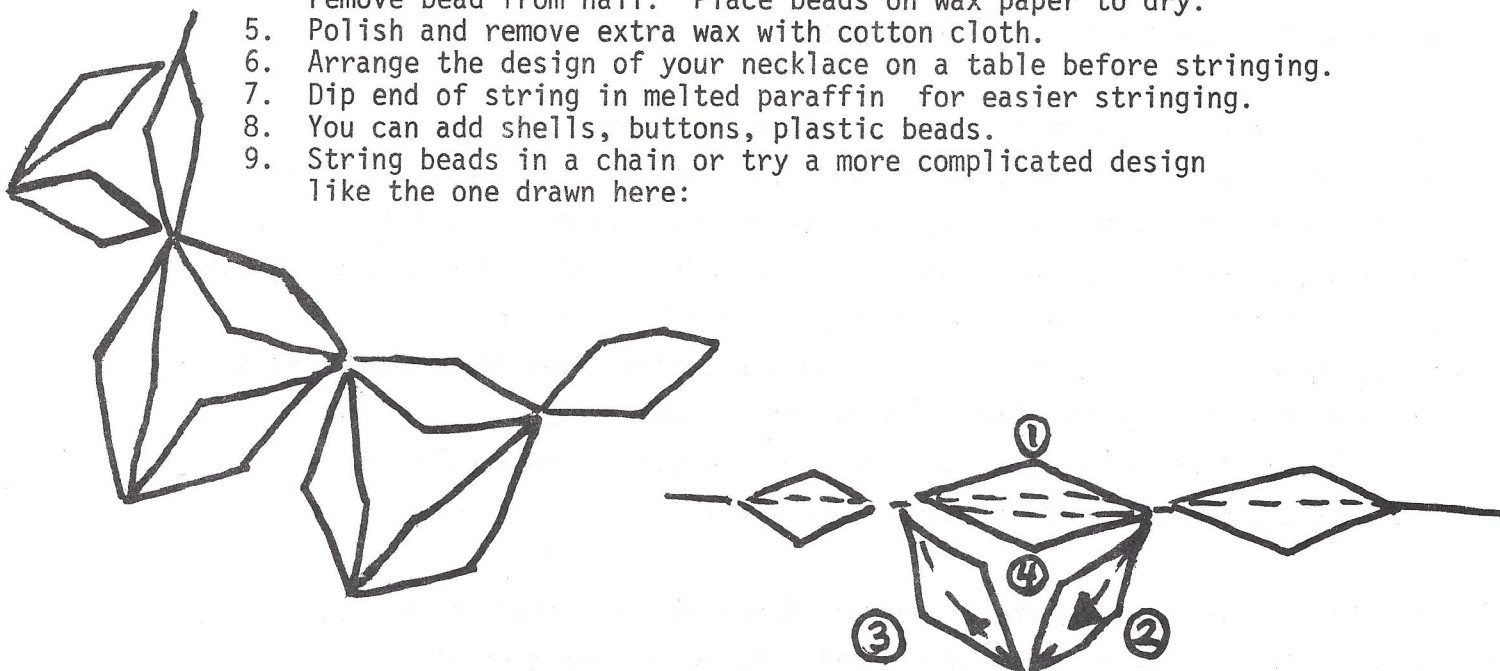
EXERCISE: You have lots of free time. Make a necklace of value. Adapt to your classroom and neighborhood environment and use what items are you can find or trade for.

Value for your necklace comes from the care spent in making it, the time and the fact that it is your own creation.

MATERIALS: scissors, paper, string, elastic string if possible, glue, paraffin, 3" nail, old cotton cloth, wax paper
and
macaroni shells with holes in them.

DIRECTIONS: WAXED BEAD NECKLACES

1. Roll paper strip tightly over a nail. Begin rolling at end.
2. When you reach end of paper, glue it together with a drop of white glue.
3. Complete about 25 beads.
4. One at a time, slip beads back on nail and then dip into paraffin to coat. Let excess wax drip off bead and then remove bead from nail. Place beads on wax paper to dry.
5. Polish and remove extra wax with cotton cloth.
6. Arrange the design of your necklace on a table before stringing.
7. Dip end of string in melted paraffin for easier stringing.
8. You can add shells, buttons, plastic beads.
9. String beads in a chain or try a more complicated design like the one drawn here:



POST-VISIT

Dangerous Clothes

What are "dangerous clothes"? Will they hurt you if you touch or look at them? Will you fall down if you wear them?

Examples of "dangerous clothes" are leopard coats, snake skin shoes, alligator purses, ivory buttons. Do you have a better idea of why these are called "dangerous clothes"?

The clothes are not really dangerous to you, but they are dangerous for the animals that are used to make these clothes. There are so few of these animals that they are endangered species. If many more of them are killed or die, it is possible we will no longer see them on the face of this earth.

EXERCISE: Design a magazine advertisement calling for the protection of one of these animals. Research the animal you are interested in. Tell how it lives and why it is endangered. Is it well-adapted to its environment?

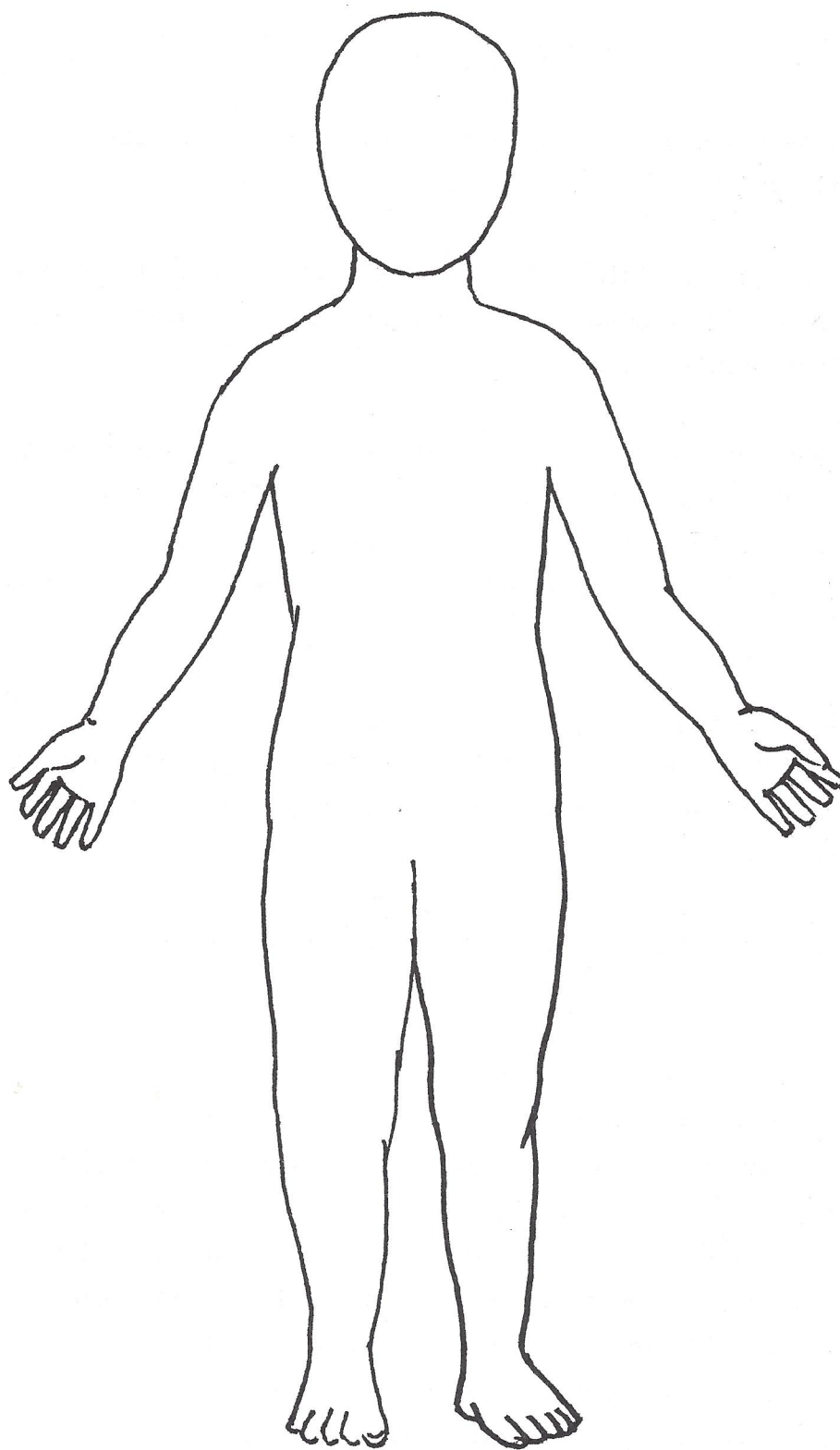
Make an animal puppet and let him tell his own story.

EXERCISE: History on Parade

1. Trace the paper doll on the next page onto a piece of hard paper or cardboard. Get lots of material scraps, buttons, etc.
2. Create a costume for your doll. Clothe the doll as if he or she lived during some period of California history. Do you want to design clothes for an explorer, an Indian, a missionary, a gold miner, a farmer, a child or mother who lived during the 1906 Earthquake? The choice is yours.
3. When you are designing your costume, include as many details as possible to give clues about the time and place your character may have lived. Look at your social studies book for costume ideas. Remember what you have seen at museums. Look in the library for more ideas.

POST-VISIT

CALIFORNIA ACADEMY OF SCIENCES
WATTIS HALL OF MAN



POST-VISIT

You Can Tell a Man by What He Wears

In the Wattis Hall of Man you saw examples of how people dressed all over the world. You were able to understand much of what their lives were like by looking carefully at what the people wore. What they wore was greatly determined by the weather in their environment.

Australian Aborigines dressed in a loin cloth, which was all that was necessary in a hot, dry environment. The people of the Japanese Rice Culture, on the other hand, wore large brimmed hats and raincoats to protect them from the monsoon rains (heavy, long-lasting rains) and insects while working in the rice fields.

The models in the Wattis Hall of Man also gave us clues through their clothing about the activities performed in the different cultures. The people of the New Guinea Highlands were involved in much warfare. The wars gave the warriors a chance to show off their finest ornaments and to be seen and remembered as skilled fighters.

The heavy skin and fur clothing of the Netsilik Eskimos protected them in the extreme arctic (cold!) environment, especially during the long hours of the seal hunts.

Clothing tells us what materials may be available in an environment. For example, in the Central Caroline Islands, skirts and loin cloths are woven from fibers of banana and hibiscus plants. These clothes are thought to be the most skillful creations of the women.

EXERCISE: Active Anthropologist

An ANTHROPOLOGIST is someone who studies about humans and their cultures. Today it is your turn to become an anthropologist. Begin as quietly as you can. Choose an adult or child who you do not know at all or who you do not know very well. Here is the case you are going to solve:

USING ONLY THEIR CLOTHING AS CLUES, SEE WHAT YOU CAN TELL ABOUT THEIR LIFE STYLE AND THE GROUP OF PEOPLE THEY MIGHT LIVE WITH OR BELONG TO.

POST-VISIT

CALIFORNIA ACADEMY OF SCIENCES WATTIS HALL OF MAN

See if you can also guess who their friends might be, where they work or play and anything else their clothes might tell you.

Observe this person for several days and at different times of the day, if possible.

After you have gathered your information and have nearly solved the mystery, schedule an interview with your "subject" (person).

Say you are an anthropologist trying to understand the life style of San Franciscans of the 1980's. Ask questions if you couldn't find out everything you wanted to know from your observations.

For example: Are certain clothes worn because they are advertised on television or in magazines?

Here is a list of questions to ask yourself as you try to get information.

GOOD LUCK!

1. Do their clothes help them do something? Do they serve a purpose? Example: a heavy fireman's jacket protects him while fighting a fire.
2. Who or what makes their clothes? Are they one-of-a-kind or very common?
3. Do the clothes seem to tell you something about the personality? Example: Do they tell you a favorite color? Do they show how neat some people are? Do they show that some people like to be different?
4. Are their clothes like the popular styles?
5. What do the clothes tell you about the climate?

Review your findings so that you can share them with your class.

Remember the identity of the person you observed must remain a secret! You may not learn lots of new names - but you will learn a lot about the lives of people in San Francisco in the 1980's.

Weaving and Clothing

Some form of weaving is found in almost every culture in the Wattis Hall of Man. Clothes are woven in the Central Caroline Islands, blankets are woven by the Navajo Indians and other cultures weave baskets as well.

Twigs, reeds and other objects can be twisted and interlaced to weave a basket. By interlacing (criss-crossing) threads or yarn, a cloth, or fabric can be made. A LOOM is often used for this process.

People have figured out ways to cross the different threads to make beautiful patterns in the materials.

Let's try a simple method of weaving.

First learn these words:

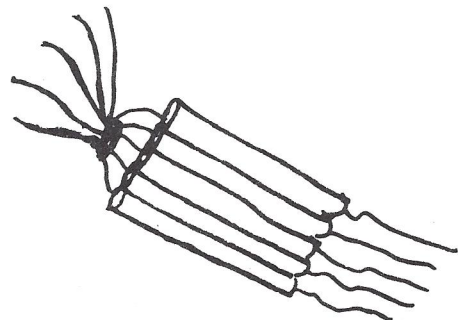
WARP - lengthwise threads

WEFT or WOOF - crosswise threads

EXERCISE: Plastic Straw Weaving

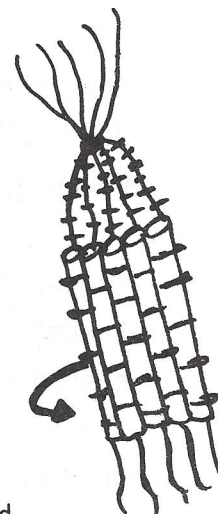
Materials: five drinking straws, paper clips, yarn or cord,
large needle or wire hanger

1. Tie a paper clip to a piece of yarn or cord which is one meter long. Make four more of these.
2. Thread the free end of the yarn or cord through the straw. Use the large needle or hanger to do this.
3. Attach the paper clip to the straw. This will keep the yarn from slipping down the straw in the middle of your weaving. If your cord is heavy enough, a big knot will work just as well.
4. The WARP threads are in the straws. Hold the straws in your hand with the knots up.
5. Cut another piece of yarn one to two meters long and tie it to the far left straw about one-third of the way down.



6. This is the WEFT yarn. It should be woven in and out of the little straw loom.
7. Hold the straws just close enough together to allow the WEFT to slip down between the straws.
8. Tie another color yarn to the first piece when it is used. The WEFT works down the straws and onto the WARP threads.

A headband or belt may be made this way very quickly. A small project could be a book mark. Straw weaving can be done on any number of straws - from two, to as many as you can hold in your hand.



M.H. DE YOUNG MEMORIAL MUSEUM

The M.H. DeYoung Memorial Museum is an art museum. What is ART?
Some people think art is only paintings and sculpture we might
find in a museum.

If Aunt Sally or Cousin Bill paints a picture, it's not really art.
Or is it?

If we see a brightly colored cover for a rock group's newest album,
it's not really art. Or is it?

Even today, many people have trouble agreeing on what art means.
Let's see how well you can do!

EXERCISE:

1. Break into small groups of 3 to 5 students.
2. Using dictionaries, dreams or brainstorm - see if
you can agree on a meaning for the word ART.
3. Make two lists:
 - a) Five things that are works of art.
 - b) Five things that are not works of art.

Here's something else that might be fun to do:

Name your very favorite work of art and explain why you like
it so much. (Hint: It doesn't have to be a painting in a
museum!)

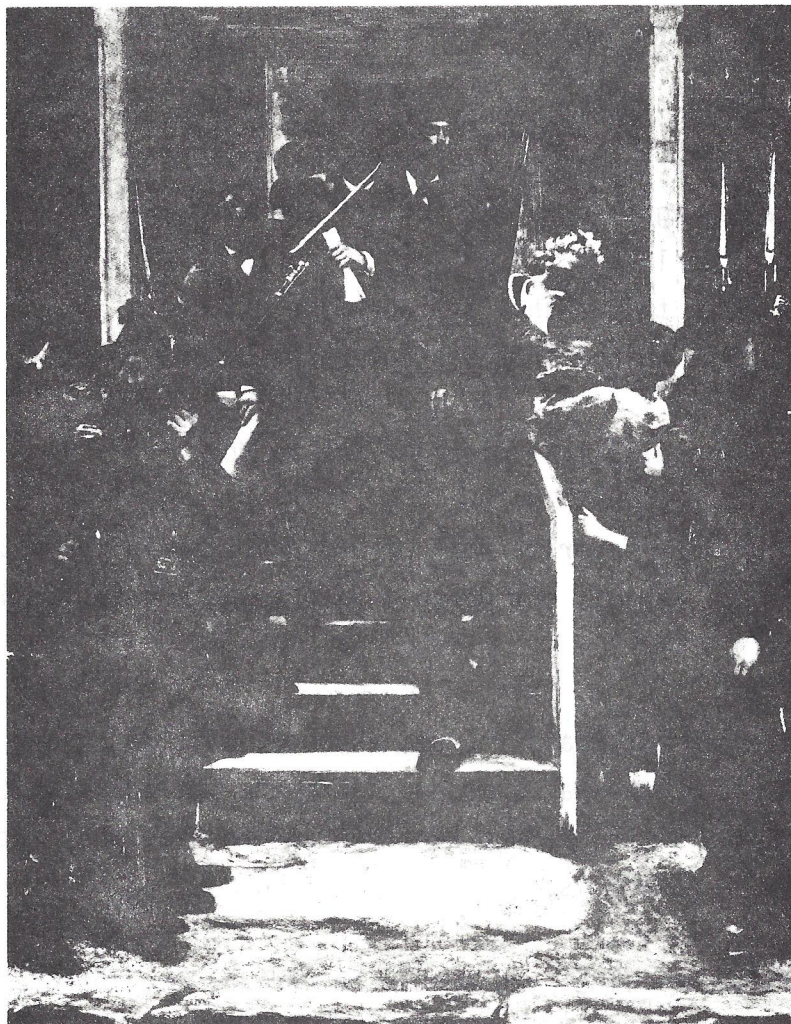
Now that we know what art means (to us, anyway), what is an art museum?
We learned a little about what a museum is in the introduction to your
CALIFORNIA TREASURES workbook. Go back now and re-read the part where
it describes what a museum is.

Instead of reading this line, you should be back at the introduction.
GOTCHA!

Okay. So an art museum is a place that collects, preserves, exhibits and explains (interprets) art.

The DeYoung Museum is filled with art treasures from the past. It is a place where we can find out about the people, houses, countryside and daily life of a time that is now history. We do that by looking closely at the paintings, sculptures and other things in the museum.

In fact, before photography was invented, painters and sculptors were the only ones who could keep visual records of their times. These records are some of the things that the DeYoung Museum collects, cares for and displays.



THE LAST MOMENTS
OF JOHN BROWN

Thomas Hovenden

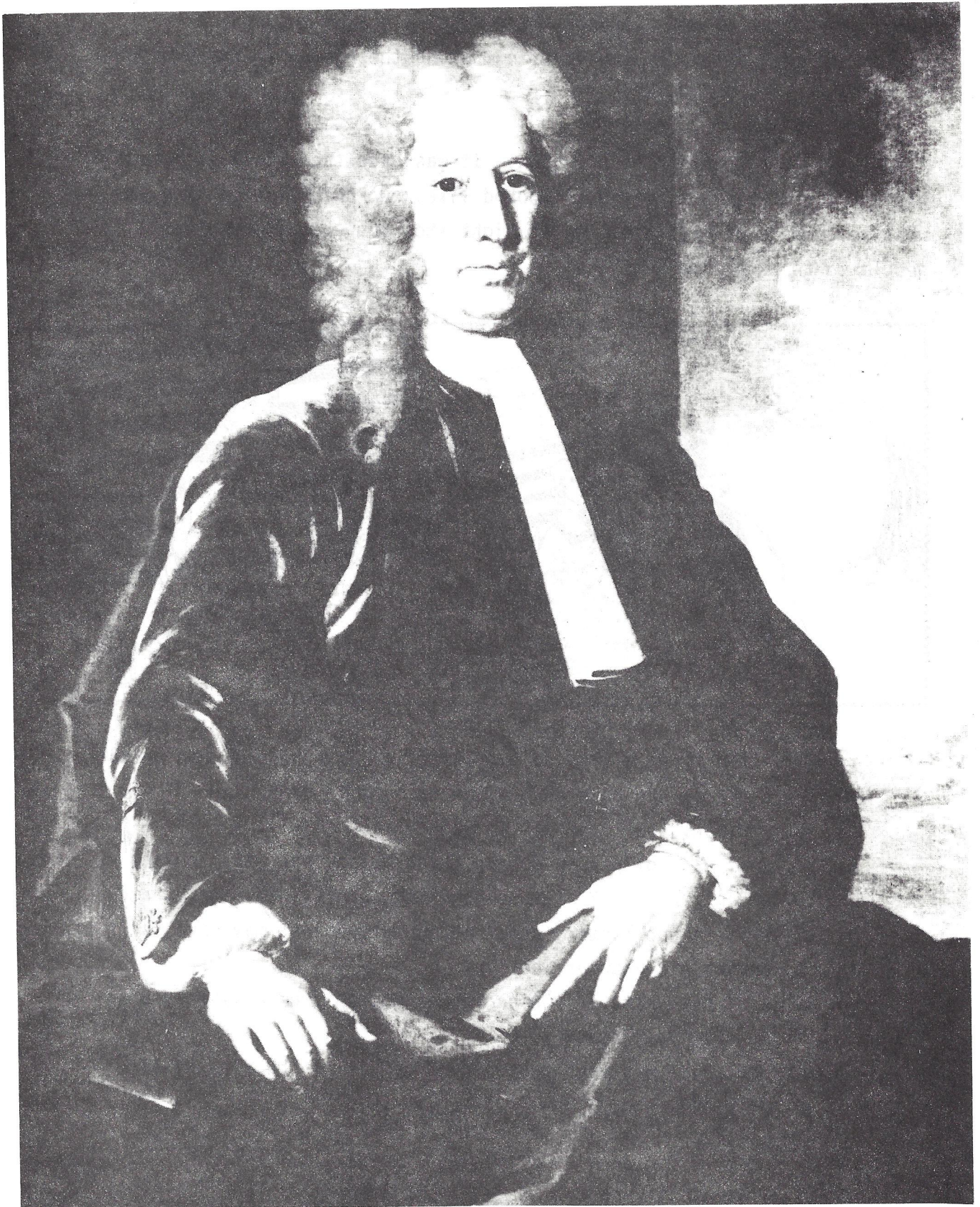
We can learn about our world now by looking at the objects of yesterday. Paintings become windows through which we can look at the past. One of the most interesting ways of comparing the past with the present is by looking at PORTRAITS.

A PORTRAIT is a painting of a person. It was used (and still is) as a way to record what an individual looked like. A PORTRAIT will show you what someone is or was like. Or it might show you what someone wanted people to think he/she was like.



EXERCISE: On the next page is a portrait of John Nelson when he was 78 years old. It was painted by John Smibert in 1732.

1. How many years ago was it painted?
2. What kind of person do you think Nelson was - by looking at this picture? (Example: kind, poor, intelligent, etc.)
3. Write a short story about an adventure that may have taken place during his younger years.
4. Find out whatever you can about Nelson from a library book or from your teacher.
5. How close was your description of him to the kind of life he really had?



Now comes the exercise that is the most fun because YOU are the artist!
You are going to draw a portrait of a friend.

EXERCISE:

1. Choose someone in the class.
2. Decide who will be the artist first (and who will be the model).
3. Get a piece of white paper and a pencil.
4. Have your model sit across from you in a comfortable position - looking straight at you.
5. Here are some helpful hints for successful portraits:
 - a) Eyes are about $\frac{1}{3}$ from the top of the head.
(Leave room for brains and hair!)
 - b) There is space for one eye between most eyes.
 - c) Ears start at the same level as the eyes and continue to the bottom of the nose.
 - d) Necks start at the ears and flow into the shoulders.
 - e) Mouths curve out to cover teeth.
 - f) The iris (colored part) of the eye is covered by the eyelid, except when we want to show excitement.
6. When you finish drawing with the pencil- use some crayons or colored markers to finish up your portrait. Include details - like plaid or striped shirts, etc.
7. Now it's time for you to be the model!
8. When everyone is finished being artist and model- share your portraits with the class. See if people can recognize the model for each picture.

READING A PAINTING

When we read a book, words tell a story, words create a mood, words give information. We must understand the words, the vocabulary, to make sense of the book. When we "read" a painting, the silent language of the "elements of art" give us information.

The "elements of art" are like the vocabulary of the books; we must understand what the elements of art are so we can read the painting and appreciate it.

What is an ELEMENT? It is like an ingredient; a part of a recipe. If you put all the ingredients together (all the elements), and use your imagination, then you create a work of art.

Here are the 5 elements of art: COLOR, LINE, SHAPE (FORM), TEXTURE, VALUE.

1. COLOR -

Primary: red, yellow and blue.

(When these colors are mixed in different ways they make the Secondary colors)

Secondary: orange, green, purple.

Hue: The name of the color. Example - red.

Intensity: how dark or bright

Value: amount of dark or light

2. LINE - A path of action which moves through space.

Lines can vary (be different from each other):

width

length

amount of curve

direction, position

3. TEXTURE - How rough or smooth something is or appears to be.

4. SHAPE - The mass, the form.

positive shape - which is the object

negative shape - which is the shape left around the object.

5. VALUE - The amount of light and dark.

EXERCISE: TREASURE HUNT - Search for Examples of the Elements of Art

Materials: Good eyes, glue, scissors, marking pens, crayons, pencils, large piece of drawing paper or cardboard, old magazines.

1. With a partner, hunt through old magazines and through your imagination to find and/or make each of the items on the list below.
2. Follow the example of the sample charts on the next page.
3. When you are finished "hunting" and putting together your charts, display them to your class.
4. Happy hunting!

A. COLOR

Make a color wheel showing primary and secondary colors.

B. LINE - Find a photo of:

1. Line found in nature. Example: zebra, twigs.
2. Line made by man or take yarn and make an outline of an object. Example: lamp, table, pencil.

C. TEXTURE - Find:

1. Natural object. Example: rock, sponge.
2. Man-made object. Example: springs, cardboard.
3. Visual: Photo of a work of art using texture.
4. Tactile (something to touch). Example: velvet, burlap.

D. SHAPE - Find:

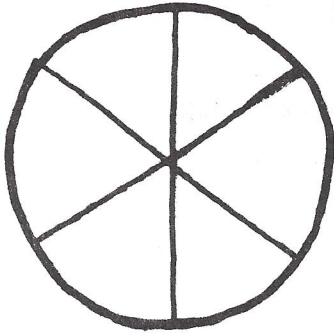
1. Photo of an interesting man-made shape.
2. Photo of an interesting natural shape.

E. VALUE SCALE

1. Make a value scale. Use pencil; begin with darkest and move to lightest.
2. Find: -black-and-white photo showing value in something man-made.
-black-and-white photo showing value in a natural object

ART ELEMENT CHARTS

COLOR



Primary ●●●
Secondary ●●●

VALUE

Black & white
photo of
man-made object



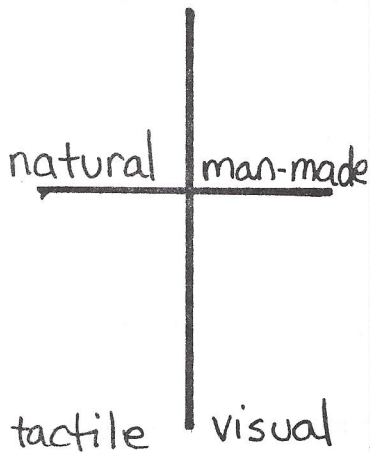
Black & white
photo of
natural object

LINE

Photo of
natural line

Photo or yarn
outline of
man-made object

TEXTURE



SHAPE

Photo of
man-made shape

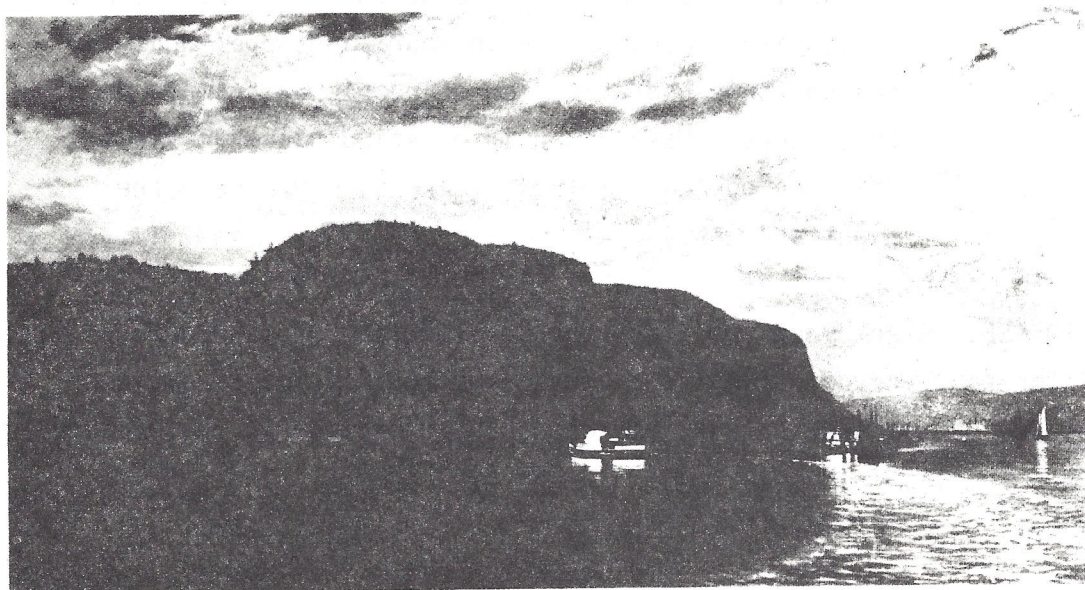
Photo of
natural shape

WISH YOU WERE HERE

"Wish you were here." Have you ever heard or read that sentence before? You may have seen it on a picture postcard. The picture gave you a lot of information. It was a visual record. It showed you how the area looked. Like many of the paintings in the DeYoung Museum, the picture postcard gave you a visual record of how people and places looked.

At times, artists paint us a picture of the real world. When they paint pictures of what is outdoors, the painting is called a LANDSCAPE.

Sometimes artists paint exactly what they see. At other times they paint "landscapes of their minds," pictures of the world as they imagine it or wish it could be.



VIEW OF THE PALISADES, SNEAD'S LANDING
HUDSON RIVER

J.G. Brown

You can be a landscape artist! All you have to do is make a drawing of an outdoor scene.

Think about the landscape you might draw. Will it be a picture of a place in a city or in the country? A place from the future or the past? Will you use bright or quiet colors, what kinds of lines and shapes will you have?

EXERCISE: Making a Picture Postcard

Materials: newspaper, paper, liquid starch, chalk, a stamp, pen,

1. Cover the desk with newspaper.
2. Use your drawing paper and cover it lightly but completely with liquid starch.
3. Use colored chalk and draw a landscape.
4. Let it dry overnight.
5. On the back of the postcard, send your friend or relative a "Wish you were here" note. Explain why you would like him or her to be there. Describe what it is like to spend time in your landscape: What you can do there and what kind of people or animals might live there. Make it an interesting place to visit.
6. Mail the postcard. (P.S. Make sure you have the right address!)

EXERCISE: Start your own classroom "collection" of landscape pictures. Everyone bring in a picture postcard. Tell the class how you got it and whatever you can about the place in the picture.

POST-VISIT



FLORENCE, ITALY



OLD NORTH BRIDGE

CONCORD, MASSACHUSETTS

Sometimes just a line drawn a certain way can show a feeling or mood!
Let's see how creative you can be with lines.

EXERCISE: Draw each of the following with a pencil:

- a funny line
- a sad line
- a nervous line
- a calm line
- an angry line

See if other people can "read" your lines correctly.



PORTRAIT OF A
YOUNG GIRL IN WHITE
George Luks

M.H. DE YOUNG MUSEUM
AFRICA, OCEANIA AND THE AMERICAS GALLERY

Artists are people just like you who have a talent or skill as a painter or a sculptor or as a dancer or a musician or as a writer. In fact, there are artists in just about every kind of work or profession.

Art is thought to be beautiful, therefore a person who makes something beautiful is an artist. But what is beauty? To some people a car's engine is beautiful. To others it is just a mess of machinery. To some people a certain poem is beautiful. To others the same poem seems silly. Some people think New Wave music is beautiful - some think it's dumb.

Usually a group of people shares a feeling about what is beautiful and what is not - even though some people in the group might have different ideas.

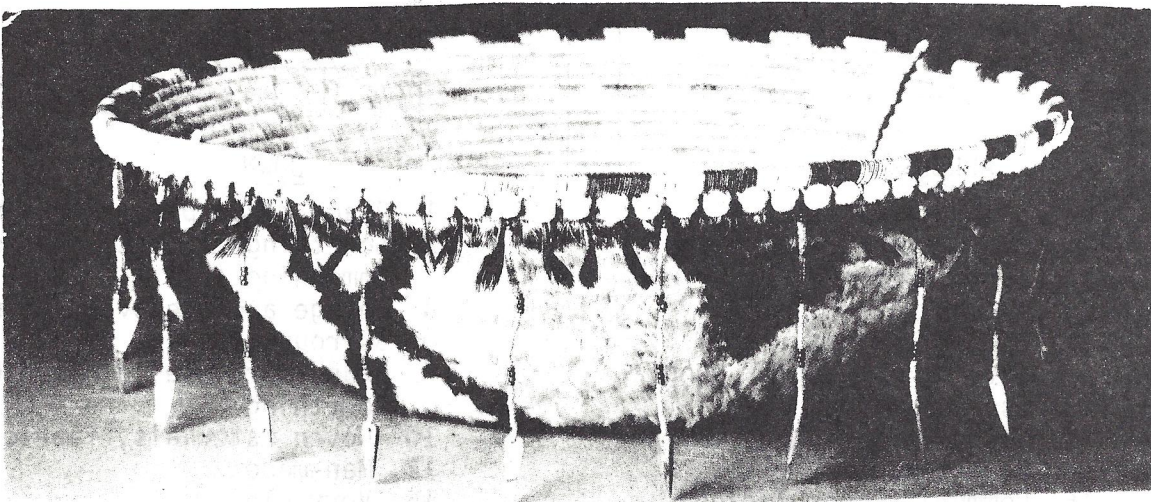
EXERCISE: Make a list of five things you think are beautiful. See how many people in your class agree. Listen to what they call beautiful. You may be surprised.

Now make a list of five things everyone in the class agrees are beautiful.

Sit down in a circle with your classmates and discuss some of these questions:

1. Do the five things have anything in common? (Are they alike?)
2. How many of the five things are man-made? How many are natural?
3. Do you consider any of these things "treasures?" Why or why not?

AOA Gallery - Pre-Visits
Copyright 1981; Doris Ober



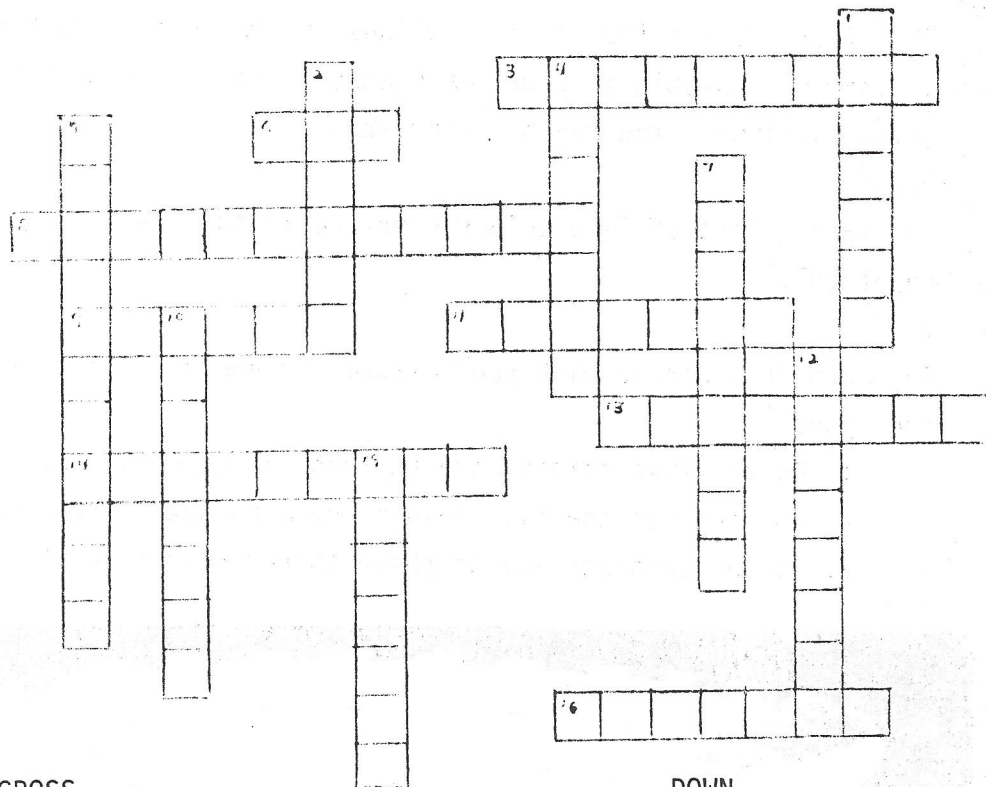
DE YOUNG MUSEUM
AOA GALLERY

PRE-VISIT

The works of art that you'll see at the Africa Oceania and the Americas Gallery (AOA) are from different cultures. Some of them are hundreds of years old. To make your visit to the AOA more meaningful, here are some words you should know. Look up each word in the dictionary, then fill out the crossword puzzle, using each new word.

WORDS TO LOOK UP:

ABSTRACT	DYE	RECYCLE
ANCIENT	ENVIRONMENT	REPRESENT
ARTIFACT	GALLERY	RITUAL
AVAILABILITY	MATERIALS	SOCIETY
CULTURE	PRACTICAL	SYMBOL
		TEXTILES



ACROSS

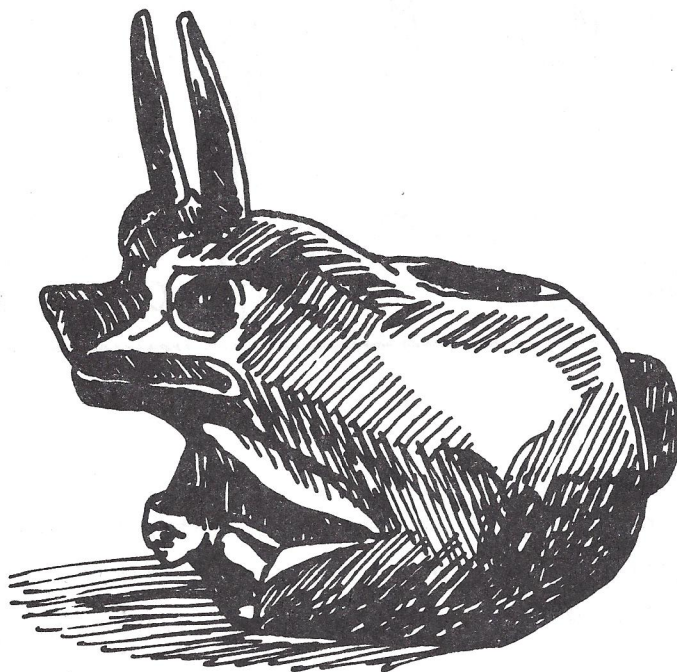
- 3 Useful, realistic
- 6 Color, stain, tint
- 8 Easily gotten
- 9 Ceremony
- 11 Ideas, customs, skills, arts of a group of people
- 13 Essence, idea, symbol
- 14 Things which when combined make something else
- 16 Community, population

DOWN

- 1 Place to display art, museum
- 2 Something that stands for something else
- 4 Change and use over again
- 5 Surroundings
- 7 Stand for, use in place of something
- 10 Woven materials, fabrics, cloth
- 12 Man-made
- 15 Very old

The AOA Gallery in the museum displays some objects that were made years ago. These objects are treasures for many reasons: They are quite old, many are no longer made at all, they are made of unusual materials.

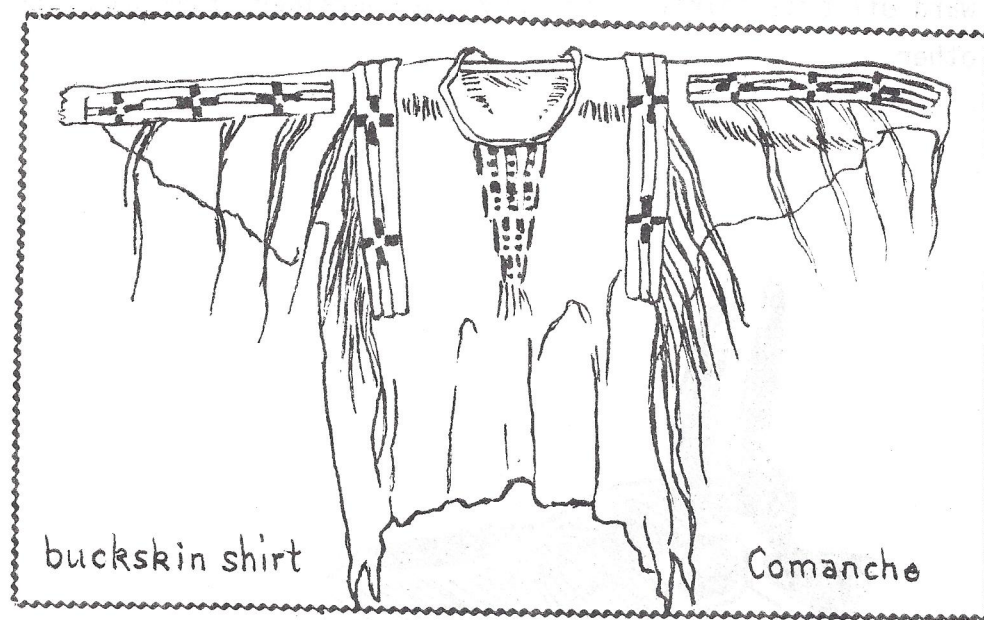
An interesting fact about the art in the AOA is that almost every object on display had a function or a practical use when it was made. Few of these objects were made just to hang on a wall for decoration. Some objects are tools used for hunting or for war or for collecting food or preparing food. Or they are things that were believed to bring good luck or to ward off evil spirits. Or they are containers that held one thing or another.



WOODEN FEAST BOWL

Kwakiutl, Northwest Coast

Another interesting fact is that many objects were made out of natural materials. Artists used natural colors made from berries or charcoal or pollen. They used natural materials that were available in their environment. People who lived in an ocean environment used shells. People who lived in forests used wood. People who hunted used animal skins and bones and even teeth. People who raised vegetables used hollow gourds and reeds and seeds.



In 20th century California, many of these natural materials are not easily available. Still, artists can create art works using simple things. On the next page is a list of materials that are available in almost every home.

EXERCISE: Choose a partner from your class and decide on a useful object the two of you can make from the materials on the list. If you don't have one of the materials at home, maybe your partner does. Remember: You can only use things on the list!

LIST OF MATERIALS:

CLOTH
WOODEN TOOTHPICKS
VEGETABLE COLORING
OR WATERCOLOR PAINT
MACARONI
TWIGS OR BRANCHES
SAND
REEDS OR STRAW
CORK

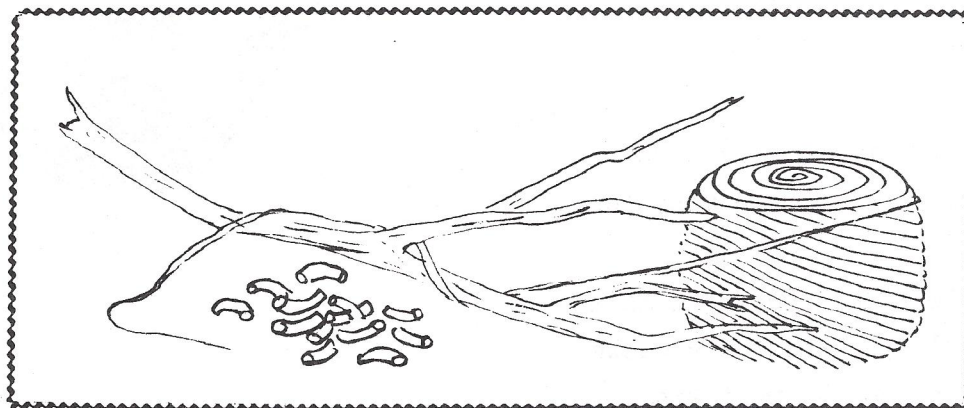
PAPER OR CARDBOARD
STRING OR THREAD
PEBBLES OR STONES
CLAY
WOOD
COTTON
ALUMINUM FOIL
FLOUR AND WATER*

*Flour and water mixed together make a good glue. Also, when mixed together and allowed to dry, flour and water will stiffen a soft material.

1. Use as many of the materials as you like. Don't tell anyone else what you and your partner are making.
2. When your work of art is finished, see if the rest of your class can tell what its use is and which materials you used to make it.

IDEAS FOR USEFUL OBJECTS TO MAKE:

A musical instrument
An eating tool
An award for making the best useful object
Something to wear
A toy for your brother or sister - or for YOU!
A container



POST-VISIT

You may have seen each of these words below several times already. You may think you know them - and you may be right. But! Just to be really sure, please look them up in the dictionary and make up a short, short story using all of them:

ARCHAEOLOGIST	FUNCTION
ARTIFACT	SOCIETY
CULTURE	

MASKS

You saw many masks in the AOA Gallery. These are artifacts that tell us something about the religion, the culture, the history of many societies.

For the next activity you will make a mask that will tell something about life in California in the 20th century. Think of this mask as an artifact of the future.

This is the space age, the age of computers and television. This is the age of fast cars, pollution and conservation. This is an age when people are going back to nature and religion. This is an age of rock and roll music.

So many things are happening now that your mask could take many forms!

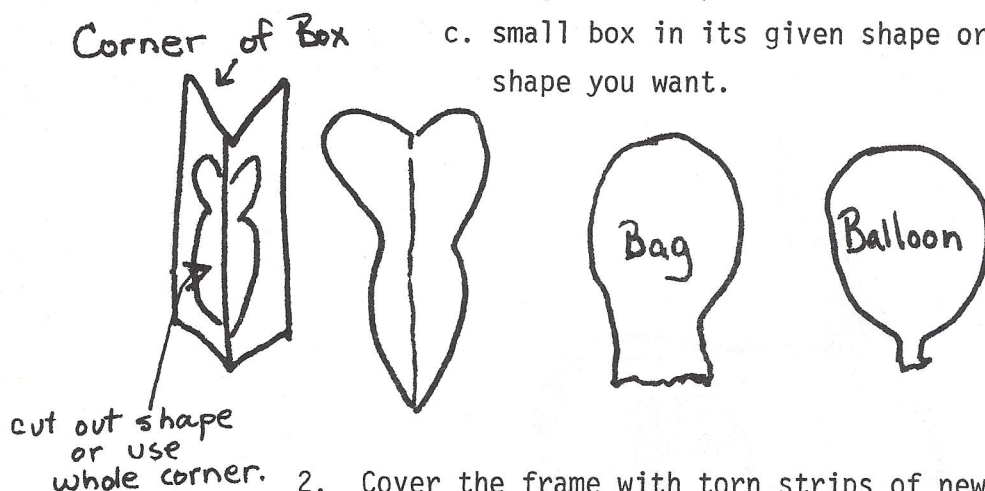
What does the Female Portrait Mask on the right tell you about the Ogowe River Area in Gabon? What kind of person do you think wore this mask?



EXERCISE: Paper Maché Masks

Materials: strips of newspaper, boxes, bags, balloons, styrofoam pieces, flour paste or liquid starch as glue, cardboard tubes, shellac, paint, brush.

1. Depending on the shape you want for your mask- use one of the following for the frame:
 - a. paper bag filled with styrofoam pieces
 - b. large blown-up balloon
 - c. small box in its given shape or cut into the shape you want.



2. Cover the frame with torn strips of newspaper (about 1½" wide) which have been covered with flour paste or starch. Overlap the edges of the strips as they are laid on the frame. Smooth with your fingers.
3. Put down 4-5 layers of newspaper strips. Each layer should go in a different direction. Use a different color of newspaper for each layer so you can keep track of how many layers have been finished.
4. If you want eyes, ears, horns or anything else to stick out on the face - make it even bigger than normal so it will show up well when you are done. To do this use wads of newspaper or cardboard tubing. Attach these parts (noses, ears, etc.) with strips of newspaper dipped in starch.
5. Let dry completely.
6. Draw design of mask with chalk until you like it.
7. Paint your mask.
8. Add yarn, rope, ribbon.
9. Shellac completed mask.

EXERCISE: When your mask is complete, put it on and become the mask. Speak to the class as if you are the face on the mask. For example, "I am the Music of the times. I entertain..."

Prepare yourself for your new role by thinking and writing down why you are (as the masked person) a treasure of California.



Gift Basket - Pomo Indian Style

Try making this basket. The process you will use is very similar to the one that was used by the Pomo Indians. You will be working with your hands. You alone will be responsible for making it from beginning to end.

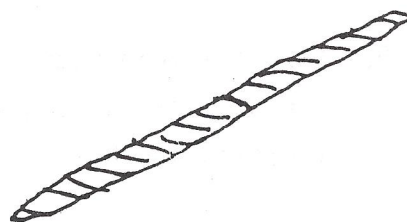
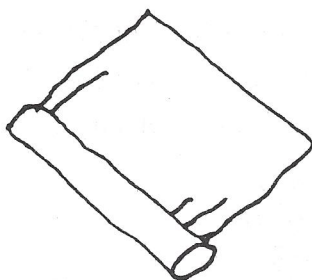
Like the Indians, you will be using materials that are available from your environment. And like the Indians, you will need to take time and care in your work. And like the Indians of the past and the people of today, you have the ability to show your own creative spirit in your work.

EXERCISE: Gift Basket - Pomo Indian Style

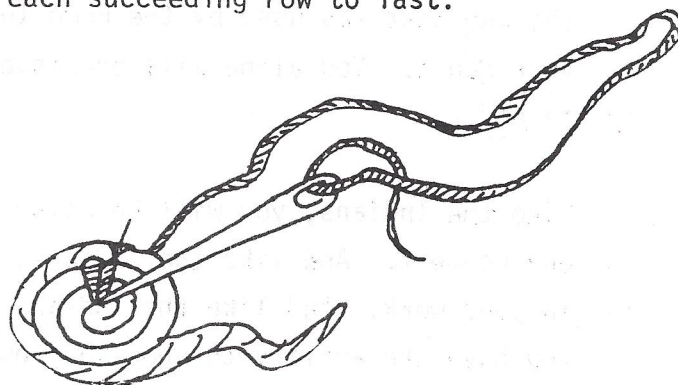
- Materials:
1. Large needle to hold thick yarn or string.
 2. Cotton or wool yarn (Chenille yarn is good because the feathering hides mistakes), string, hemp, etc.
 3. Scissors
 4. Kleenex or light weight rope, if available; twine-like material used for seats or ladder back chairs is inexpensive, if available.
 5. Small feathers, thread, beads, shells with holes and white glue.

Directions:

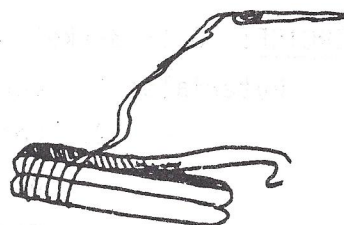
1. Roll and twist kleenex into coils.



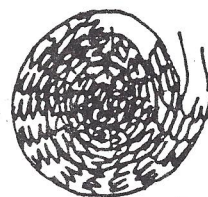
2. Thread yarn onto needle. Unless yarn is extra thick it can be used double and the weaving will go faster. Roll coil into spiral and beginning at center, over-cast first two rows. Continue overcasting each succeeding row to last. Make sure needle goes between rows and not through the middle of a coil. When the circle reaches 4" diameter, stop. Cut yarn and tuck in end.



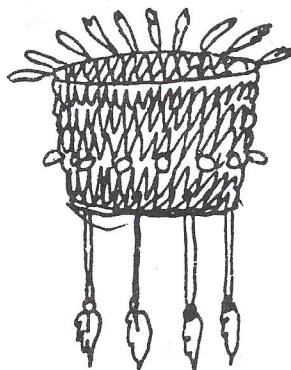
3. Add new kleenex coil on top edge of circle and stitch to bottom outside coil (use over-cast).



4. Continue adding coils going "up" until 4-6 rows are completed. If the coil is too small, add a new one. Over-lap at the joint (edge) for stronger walls and no holes.



5. Clip all yarn ends and tuck under with needle end. Some can be left hanging, especially on the bottom. Later, feathers and beads or shells can be tied on.



EXERCISE: The Cup Caper

For this activity everyone must bring a cup of some kind (any kind!) from home. In fact, it would be even better if you could bring two cups.

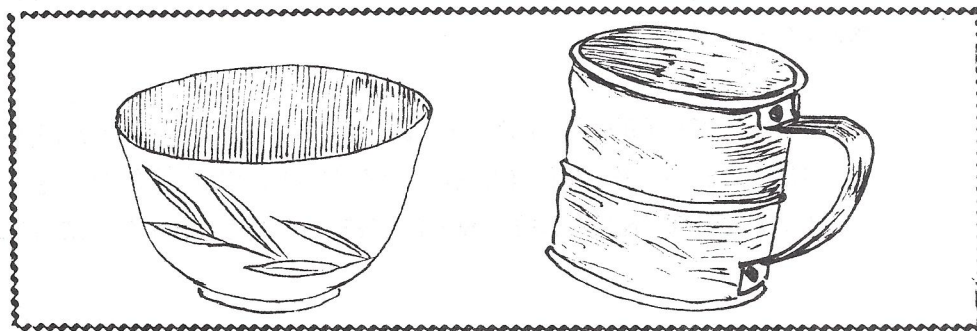
Imagine you are an ARCHAEOLOGIST. That is someone who studies places and objects from past cultures. Imagine that you are studying about a group of people who have disappeared off the face of the earth. All that is left from this society (group of people) is some artifacts. And all of the artifacts are CUPS!

Use the cups as the main clues to what life was like when these people lived. Here are some questions you might try to answer:

1. Where might these people have lived?
2. What materials were available?
3. What do you think their life was like if they had the time to make such cups...(easy, hard, rich, poor)?
4. What use do you think each cup may have had?

Now pick one cup and one partner.

1. With your partner pretend you are the people who used this cup. Show how you behaved when you used it. Were you polite, rough, noisy? Were you rich or poor?
2. Prepare a short skit to show these things to the class. Don't forget that your language might be very different from the way you talk today! You might communicate with grunts or signs or whispers...



ARTIFACTS OF YESTERDAY AND THE FUTURE

The objects displayed in the AOA Gallery are artifacts. They were made by hand, for a practical use or purpose. The artifacts - feast bowls, clothing, storage boxes, masks, to name a few, are beautiful. But remember - they were not made as art objects.

By examining a group of artifacts, we can learn much about the society (group of people) that made them. The materials that were used, the design and the purpose of the object all give us information about how people once lived.

EXERCISE: Choosing the Artifacts of the 20th Century

Pretend you have one super gigantic box. The box would be sealed and stored away until the year 3000. At that time the box would be opened by the people or creatures of the future.

What would they find? That is for you to decide. You choose objects made by man that would give a clear picture of what our life is like now. When you do this, you are choosing the artifacts and treasures of the future.

What objects would you choose to tell about our sports, religions, foods, shelters, clothing, music, art?

Remember - an artifact is an object made by man that has a use or purpose. Try to choose artifacts that are well-made or well-designed. Try to choose artifacts that show your idea of beauty.

LIST EACH OBJECT THAT WOULD GO INTO YOUR IMAGINARY BOX
AND GIVE A REASON WHY EACH OF THESE OBJECTS TELLS
SOMETHING IMPORTANT ABOUT LIFE IN CALIFORNIA IN THE 1980's.

POST-VISIT

DE YOUNG MUSEUM

AOA GALLERY

After emptying a can or bottle, we will often throw it away; dispose of it. However, as the cost of making these containers increases, and the availability of the materials (natural resources) decreases, people are beginning to re-use bottles and cans. When we use the containers again, we are RECYCLING.

Here is a chance to RECYCLE boxes, not as boxes, but to make a Box Sculpture.

EXERCISE: Box Sculpture

Materials: Boxes of various shapes, sizes, colors (none too large), glue, staples, scissors, colored paper, odds and ends, masking tape.

1. Arrange boxes in form of an animal or pleasing form. Cut and tear when necessary to create the shapes you want. Glue it together.

OR

2. Take one large box and cut it apart. Divide the inside into spaces with smaller boxes. You will then have a start for all kinds of shapes and projects and ideas. Be as creative as you can!

EXPLORATORIUM

The Exploratorium is a science museum where you can have fun and learn about yourself at the same time. You can discover how your senses work by touching, hearing, seeing and exploring the exhibits.

While you are at the Exploratorium on a field trip, you may want to pick out six or ten exhibits that you will want to show your family or friends when you bring them here during weekends or holidays.

LIGHT AND REFLECTION

Light makes things visible, yet you cannot see light pass by you. You may think you see sunbeams streaming in the open window, but actually you see the light reflecting off dust in the air. Everything you see is either making light or reflecting light. Lightbulbs, stars and fireflies create their own light. Just about everything else, including you, basks in the light created by something else.

All things reflect some light. Surfaces that aren't shiny, such as pages from a book and the clothes we wear, reflect light in many different directions, sending information to the eye about the surface of the object.

Shiny, smooth surfaces, like still ponds and bathroom mirrors, reflect light more regularly. Instead of seeing the surface of the mirror, we see images that appear to be behind the mirror. Regardless of the substance, light is always reflected according to the following rule:

LIGHT ALWAYS BOUNCES OFF AT THE SAME ANGLE IT HITS.

Curved (concave, convex) mirrors follow the same rule as the other reflectors. Since the light strikes curved mirrors at strange angles, it does strange things to the images.

FLAT MIRRORS:

When you look into a flat mirror, such as a pocket mirror or bathroom mirror, the image you see looks just like you,

but appears to be behind the mirror. Some people think their image is on the surface of the mirror. Look again! The image on the flat mirror looks as far behind the mirror as the object actually is in front of the mirror.

CONCAVE (CURVED-IN) MIRRORS:

The image made by a concave mirror is upside-down and backwards. However, if you look at yourself up close, the image looks right side up and magnified. Shaving mirrors, make-up mirrors and inside surfaces of spoons are all concave mirrors. They produce magnified images close up, but upside-down images if you stand far enough away.

CONVEX (CURVED OUT) MIRRORS:

Convex mirrors, such as the outside surfaces of spoons and wide-angle mirrors in stores, gather images from a large area and fit them into a small area. In convex mirrors you will always see an upright image which is smaller than the object.

There is a wonderful light show continually going on in front of your eyes. You can watch beautiful pictures change and glimmer before you on the mirrored surfaces of skyscrapers or catch distorted images of yourself in someone's hoop earrings. When you become aware of reflections, you can find them everywhere. They add a certain charm and enjoyment to our surroundings.

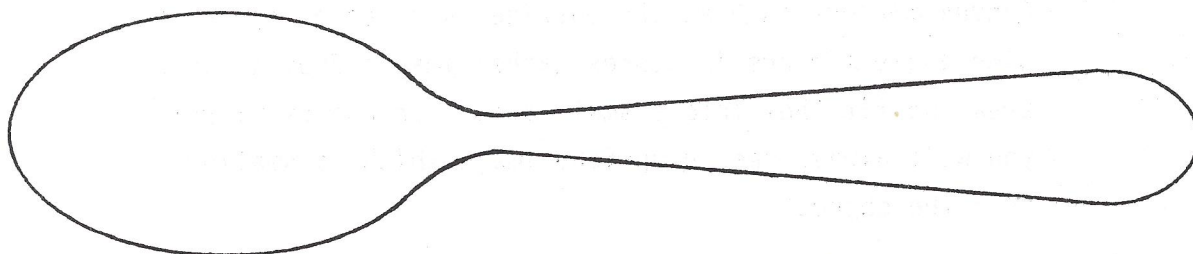
The following activities should help you become more familiar with flat, concave and convex "mirrors" and show how they reflect images differently. After you have done the activities, you can visit the Exploratorium to explore the reflection exhibits.

MATERIALS spoons, pencil, paper

ACTIVITY

Look at yourself in all the parts of the spoon.

Hold the curved-in side of the spoon about 6 inches from your face. Trace the outline of the spoon on a piece of paper and draw a picture of what you look like in the spoon.



Now hold the curved-out side of the spoon about 6 inches from your face. Trace another outline of the spoon on a piece of paper and draw a picture of what you look like in the spoon.

Hold the curved-in side of the spoon right up to your eye. Is your eye right side up or upside down?



MATERIALS your eyes and a good imagination

ACTIVITY

Look around your school and home for curved and flat mirrors. Remember that anything that is a good reflector and that you can see yourself in can be considered a mirror. Make a chart like the one below and write in the mirrors you find. For example: coffee pot, shaving mirror, car bumper, bathroom mirror.

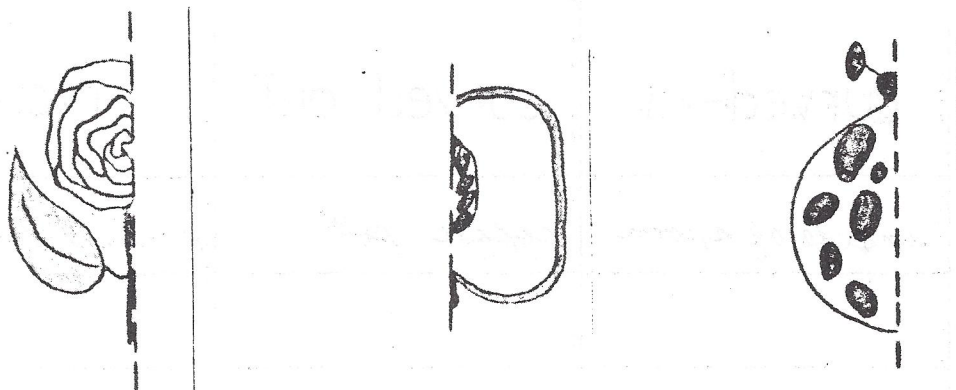
curved-in	curved-out	flat
<i>inside of spoon</i>	<i>coffee pot</i>	<i>kitchen window</i>

MIRROR KIT ACTIVITY

MATERIALS 2 big flat mirrors on stands, paper, pencil

ACTIVITY Try some mirror writing and drawing. Here are some ideas to get you started.

1. Make half of a drawing. For example, make one half of a bug. Place the mirror next to it and look into the mirror. Watch what happens. See how many other half drawings you can come up with - a butterfly, a face, a heart... what else?



2. Write secret messages that can be read only with a mirror.

Look at this sentence in a mirror: **Mirrors are fun.**

You will not be able to read it. Can you read this word? **REFLECTION**

3. Here is another way to write secret messages. Find out which letters you need only half of if you have a mirror. If you're really ambitious, go through the whole alphabet. Remember there are many ways that you can make half of a letter.

Now write secret words using half letters when you can. Here's one to get you started.



ABCDEFGHIJKLM
NOPQRSTUVWXYZ



MIRROR KIT ACTIVITY

MATERIALS 2 big flat mirrors on stands, crayons, paper

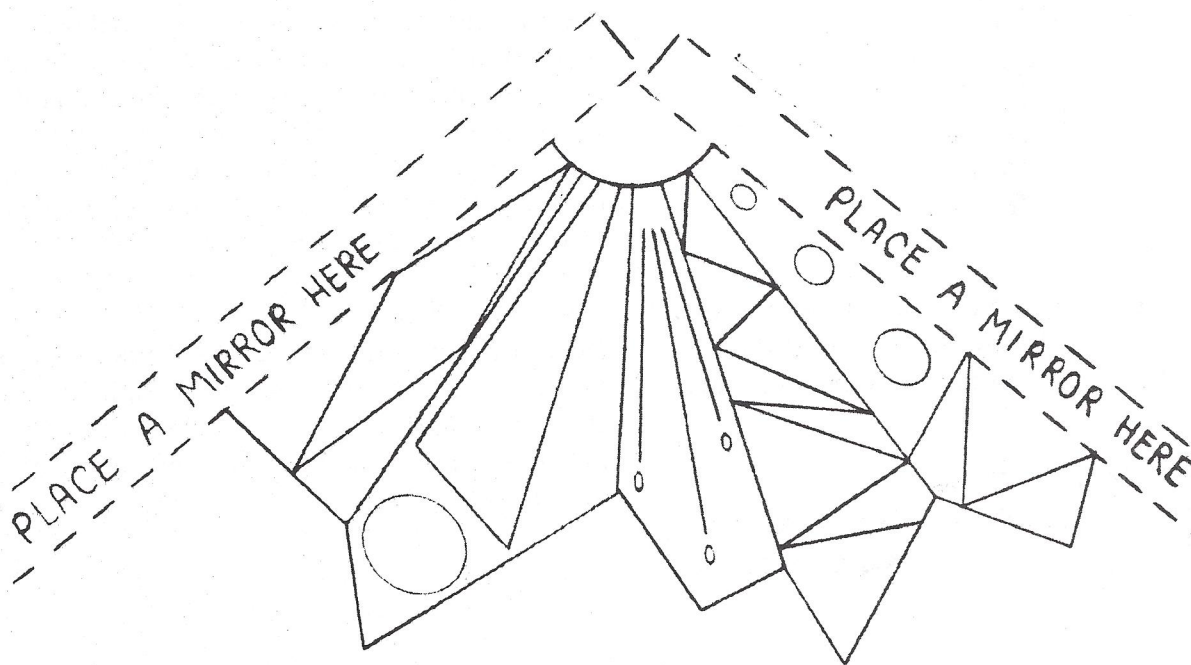
ACTIVITY

On a table set up 2 mirrors 6 inches apart. Be sure the mirror surfaces are facing each other. Look into one mirror and try counting the pictures that you see.

ACTIVITY

Put 2 mirrors on the lines below. Look into the mirrors at the design. Slowly open and close the mirrors like you would open and close a book.

Draw your own designs on a piece of paper and look at them in the mirrors. Watch the designs change as you move the mirrors.



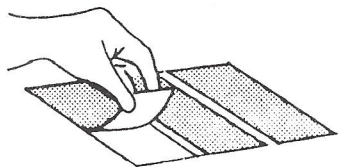
open-ended kaleidoscope

materials:

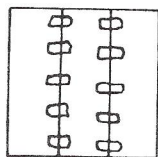
3 cardboard pieces 2 in. x 5 in. per project
 3 pieces of silver contact paper 2 in. x 5 in.
 per project
 Scotch tape or masking tape
 Scissors

making the kaleidoscope model:

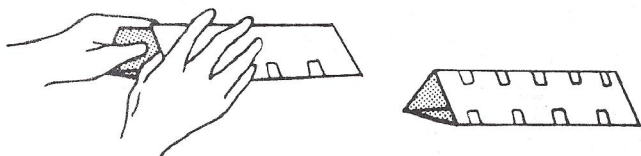
Cut the contact paper to fit your cardboard pieces. Peel the back off the contact paper and stick one piece of paper on each piece of cardboard.



Lay the three pieces of cardboard with the long sides next to each other and the silver side down. Carefully tape the two seams together. To make sure the joints will be strong, use a lot of tape.

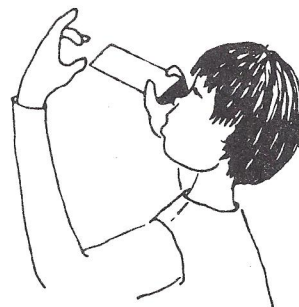


Turn the silver right side up. Bring the two side pieces up until they meet. Hold them together while a friend tapes them together.



using the kaleidoscope model:

Hold the kaleidoscope to your eye. Wiggle your fingers in front of the other end of the kaleidoscope. What kinds of designs can you see? Find other things to look at, such as a few favorites from your marble collection or a flower.



an explanation and more things to think about:

In the open-ended kaleidoscope you see reflections and reflections of reflections! If the sides of your kaleidoscope are shiny and smooth you will be able to see why. Hold your finger in one of the angles without touching the opposite side. Around the angle you will see reflections of the finger just as you can in the Kaleidoscope Model. In addition, if you look at the sides of the open-ended kaleidoscope you will see reflections of the whole configuration.

Also you can notice that as the light is reflected more times the reflections are dimmer. Even though most of the light is reflected, a little of it is absorbed each time a reflection is formed, so the latter reflections are dimmer.

FIRE DEPARTMENT MUSEUM

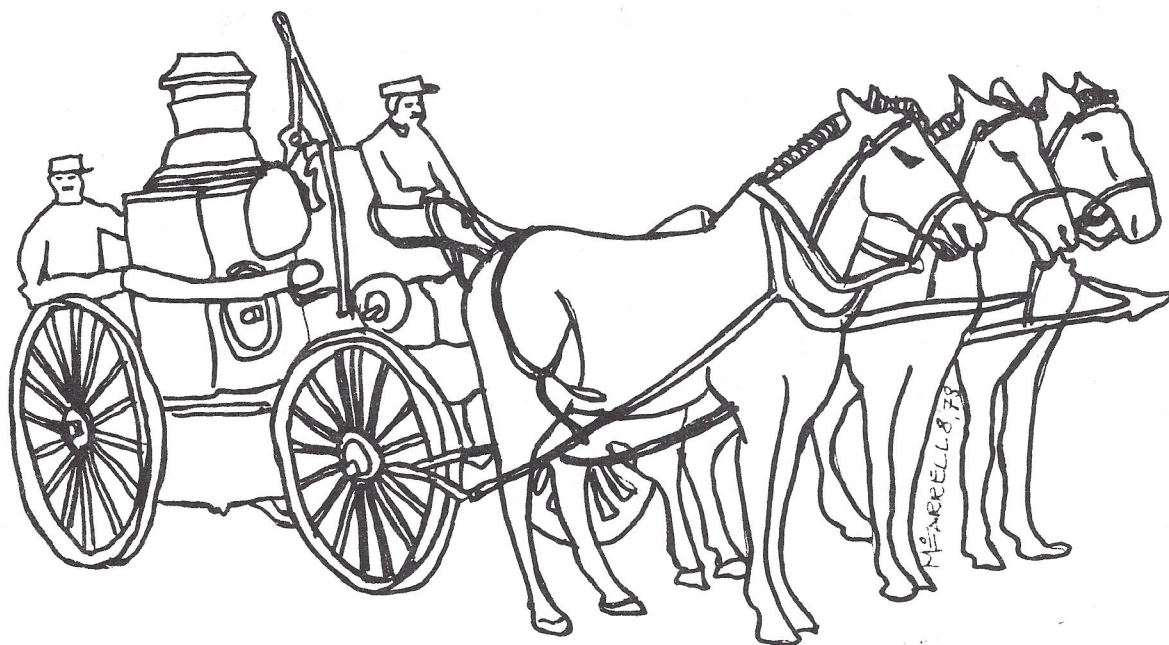
Did you ever wonder how people put out big fires before we had the huge, screaming, fast-moving fire engines of today?

Maybe you've seen a Bucket Brigade in an old movie, where people stood in a line passing along pails of water. It was kind of like a human hose!

You may have also seen later pictures of horse-drawn carriages, with men running beside them to the scene of the fire.

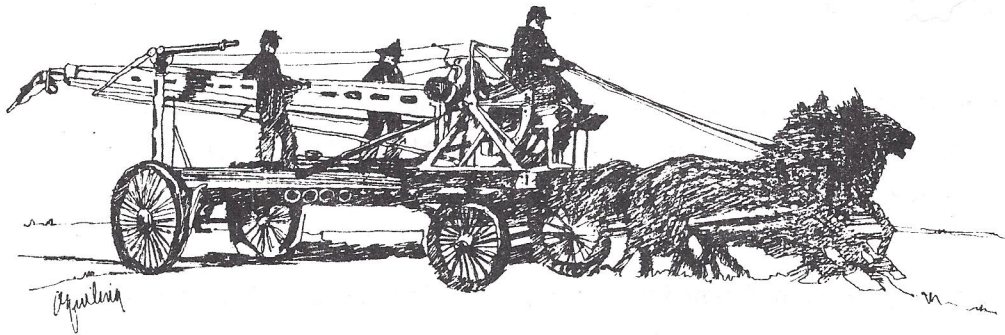
Anyway, you probably know that fires have been happening in cities for a long, long time. You probably also know that cities have been working on fighting fires for just as long.

In the Gold Rush days, San Francisco burned to the ground six times. Those tragedies led to the forming of the Volunteer Fire Department. This proud tradition continued until 1866, when the regular fire department was established.



In 1906, when there was a big fire after the earthquake, San Francisco people again realized how important it was to have a good fire department.

At the Fire Department Museum, you will see lots of old fire engines, badges, uniforms, photographs and other things that tell about different periods of fire department history.



EXERCISE: Find out what a MYTH is. (Hint: Use a dictionary!)

The seal for the city of San Francisco is of a bird from a myth—the PHOENIX. This is a bird which rises out of a burning nest.

1. See what else you can find out about the PHOENIX.
2. Why do you think that symbol was chosen for our city?
3. Name some other symbols you have seen.
4. Now- imagine you are a famous artist. Someone has just hired you to design a brand new symbol for the Fire Department of San Francisco.
5. What symbol would you choose? Why? Draw it as neatly as you can. (You might want to work with a partner.)
6. Now have the class vote on which symbol it wants to have represent the fire department.

The problems of fire-fighting in the Gold Rush days were very different from the problems of today. For example, during the 1850's, San Francisco had one and two-story buildings, a small population clustered in one main area, hand-pulled fire-fighting carriages and hoses and no water mains (no fire hydrants).

Today, the city has high-rise, highly populated structures downtown, many wooden homes in Victorian neighborhoods, and many blocks of low-rise stucco houses in the Sunset and Richmond Districts.

EXERCISE: Divide the class into two groups: Gold Rush days fire-fighters and modern-day fire-fighters.

1. Each group make a list of the types of problems they would have to deal with as fire-fighters in San Francisco.
2. Now try and convince the other group that your job is more difficult than theirs.
3. Write a paragraph on your own, telling when you would rather be a fire-fighter and why.

EXERCISE: Find out what it means to write a story in the FIRST PERSON.

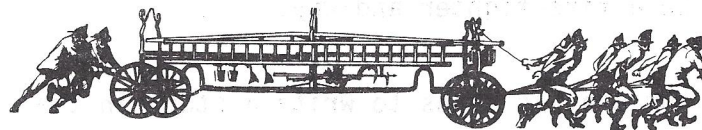
1. Write a story about a fire in the FIRST PERSON.
2. You may be any one of the following characters:
 - a. Witness or spectator.
 - b. fire-fighter
 - c. person in the burning place or building
 - d. person who calls the fire department
 - e. an animal watching the scene
 - f. Fire Chief
3. Start at the very beginning. For example, if you are a person in the building or a fire-fighter, you may have been sleeping!
4. Follow the events through to the end, which may be months later, when a new building replaces the burned one.

Now that you've seen the Fire Department Museum, you know that there have been many different styles of fire-fighting vehicles. Some have been pulled by men, some by horses and others propelled by steam or gasoline engines.

EXERCISE: Imagine you are a designer of engines in the year 2181 (two hundred years in the future!).

You have just been hired to design a brand new style of engine for the San Francisco Fire Department.

Draw your plans (with colors). Be sure to include explanations of any special features. Remember! Buildings may be a lot different then. Keep that in mind while designing your engine.



EXERCISE: Pretend you are the right age to become a fire-fighter. You are filling out a job application and you come to this section:

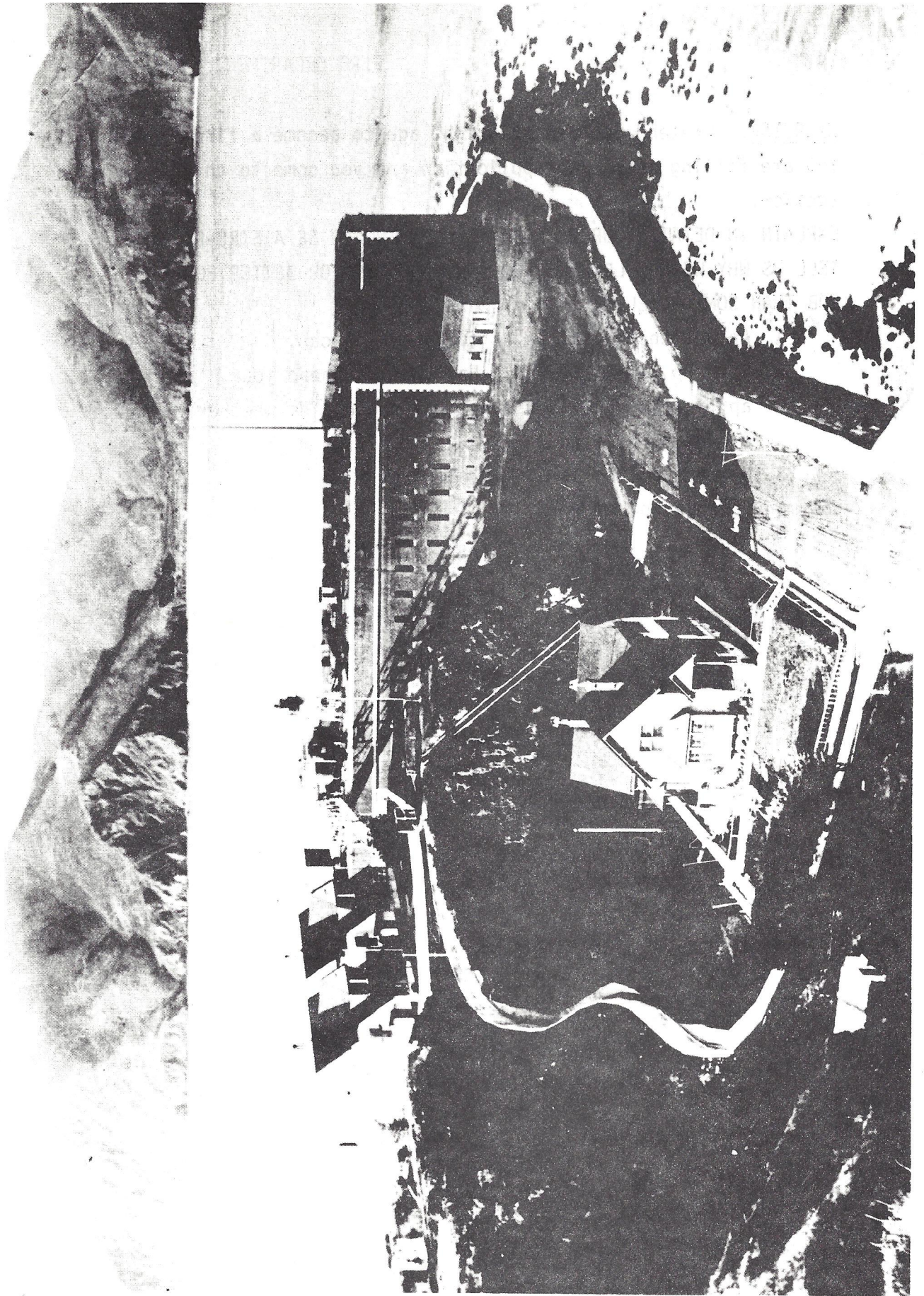
EXPLAIN IN DETAIL YOUR REASONS FOR WANTING TO BE A FIRE-FIGHTER.

TELL US WHY WE SHOULD HIRE YOU. WHAT MAKES YOU BETTER FOR THE JOB THAN SOMEONE ELSE?

1. Answer the questions as fully as you can.
2. Pair up with a friend. Have him/her read your application, ask you questions and decide whether or not to hire you.
3. Now you do the same with him/her.

How many people got hired?

Fort Point History



FORT POINT NATIONAL HISTORIC SITE

HISTORY

Spanish Period

The site of Fort Point was at one time a high, white cliff, where, in 1776, Spanish Colonel Juan Bautista de Anza raised the Spanish flag and chose the site as the place for a presidio (military post). In 1794 an adobe brick fort, the Castillo de San Joaquin, was built on the cliff to protect the Presidio of San Francisco. Finally, the Presidio was built in a sheltered valley about one and one-half miles southeast of the place chosen by Anza.

EXERCISE: Answer the following questions:

1. Why do you think that Anza chose the place on a high cliff for a Presidio?
2. What is another kind of place that might be good for a fort? Why?
3. If you were in charge, would you rather build a Presidio on a high cliff, as Anza chose, or in a sheltered valley where San Francisco's Presidio was finally built? Which place did you choose, the cliff or the valley? Why?

American Period

In 1849 M Company, 3rd U.S. Artillery, commanded by Captain Erasmus D. Keyes, became the Presidio's first permanent garrison. (Artillery soldiers are trained to fire cannon. A garrison is a military post where soldiers are assigned.) At this time repairs were made on the old Spanish fort, where four 32-pounders (a cannon firing a 32-pound cannon ball) and two 8-inch howitzers (another type of large cannon) were mounted to control the entrance to the bay. In 1853 the old Spanish fort and the hill on which it stood were leveled by the U.S. Army Engineers to make way for the building of Fort Point.

Fort Point: 1886 - Present

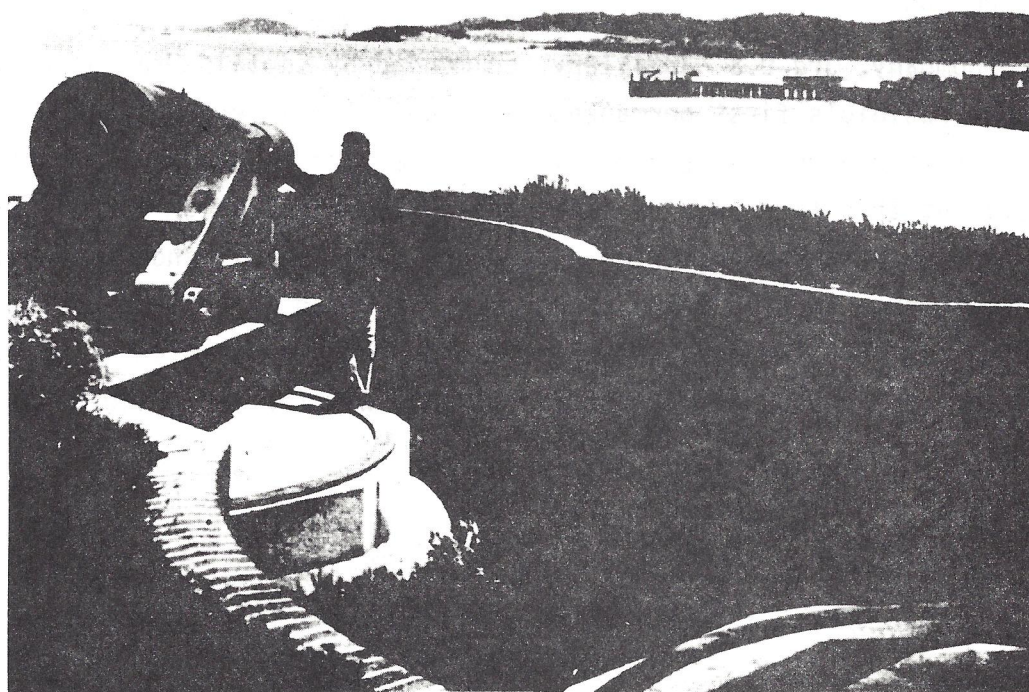
The soldiers who manned the fort and served the heavy guns left in 1886. When more powerful rifled cannons were invented, brick forts like this one fell into disuse. The old muzzle loading cannons were removed from Fort Point about 1900.

In the 1930's the initial plan for construction of the Golden Gate Bridge called for destruction of the fort to provide foundations for the bridge. However, Strauss, the engineer-designer, changed the plan and built the arch over the fort to save the historic building. The bridge was built during 1933 - 1937.

About 100 soldiers were assigned to the fort during World War II, manning searchlights and rapid-fire cannon, as part of the protection of the bay. A submarine net stretched across the entrance to the bay to keep enemy submarines out.

The fort, with adjoining land, was established as the Fort Point National Historic Site by the U.S. Congress on October 16, 1970, and turned over to the National Park Service, largely through the efforts of the Fort Point Museum Association.

The fort is open every day from 10 a.m. to 5 p.m. Work is being done to restore the fort to its 1861-1931 appearance.



EXERCISE: San Francisco Bay Area Geography Lesson

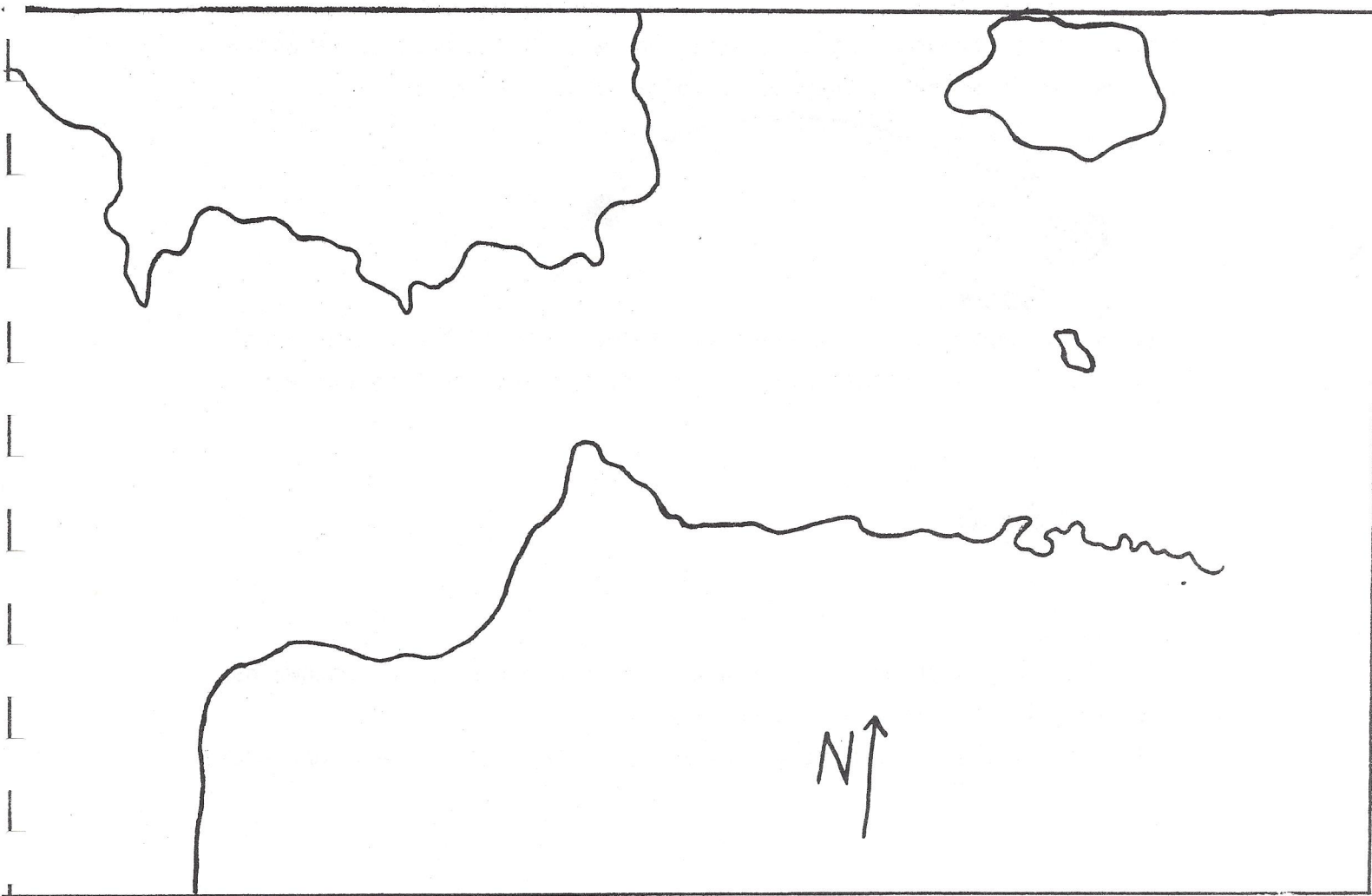
Geography means the study of the earth, what it looks like, where people are and what people do, and where things like cities, mountains and rivers are found. Maps and books help you understand Bay Area geography.

Look at the map below. Can you decide which parts are land and which are water? Lightly shade the land areas. Now put labels on these features:

San Francisco Bay
Pacific Ocean
Golden Gate Bridge
Fort Point

Alcatraz Island
Angel Island
San Francisco
Marin County

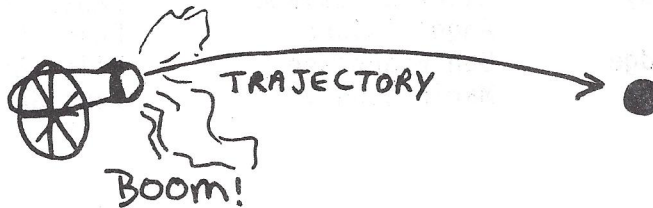
Sausalito
Point Diablo
Point Bonita
Your School



EXERCISE: Plane Sense

The soldiers at Fort Point were in the artillery, which meant that they worked with cannons and had to know all about them. One of the main things they had to know was how to make the cannonball hit the target. To do this, they had to be able to change the TRAJECTORY of the cannonball. Trajectory means path of flight.

For example:



How did they change the trajectory? One way was to change the angle of the cannon barrel. They could point it up like this:



What would happen to the trajectory if they pointed the cannon down?
Draw a picture on another piece of paper, showing the trajectory.

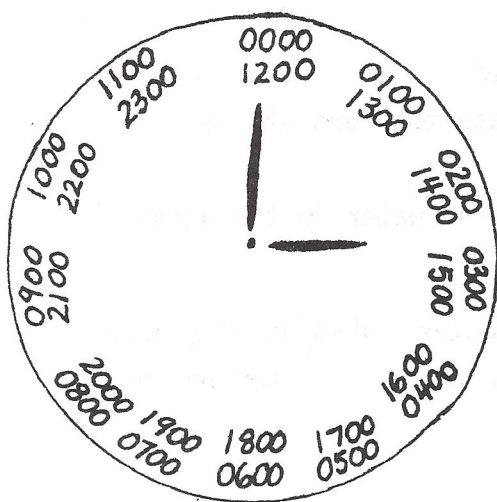
Questions:

1. When do you think they would want to shoot the cannon downwards?
2. What if they wanted to shoot a cannonball over a hill?
3. What if they used more gunpowder when they shot? Less gunpowder?

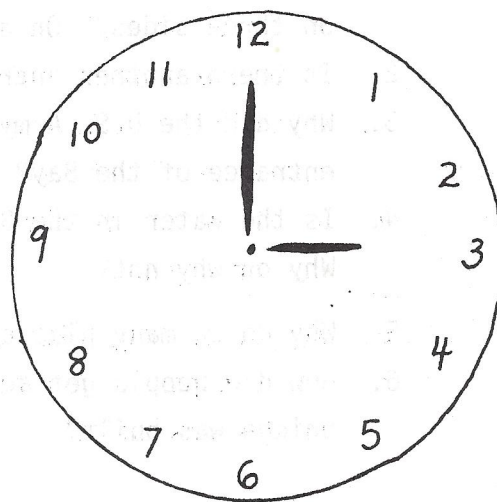
PRE-VISIT

FORT POINT NATIONAL HISTORIC SITE

- Questions:
1. What is the name of a piece of land surrounded by water on three sides? On all sides?
 2. Is there another entrance to the Bay?
 3. Why did the U.S. Army Engineers locate the fort at the entrance of the Bay?
 4. Is the water in the Bay as salty as the water in the ocean? Why or why not?
 5. Why do so many places have Spanish names? What do they mean?
 6. How did people get across the Golden Gate before the bridge was built?

TIMELY SKILLS

WHO USES ME? the Army, airlines and airports, banks, world travelers, railroads, tidetables for boaters, fishermen and beachcombers



WHO USES ME? us!! during our daily life.

READ ME

The 24-hour clock above starts at midnite (0000) and ends with 2359, the day's last minute. The time is given four digits, the first two for hours, the second two for minutes. Thus 10:30 am is simply 1030 and 10:30 pm is 2230.

The hour hand on this clock goes around twice each day. It starts at 12:00 midnite and then again at 12:00 noon. So we won't get confused we add the abbreviations am for time told before noon and pm for time after noon.

LET'S PRACTICE

What time would this be on the 24-hour clock?

1:00 pm 3:00 am
6:30 pm 11:59 pm

Correctly write these times:

10:00 in the morning
11:00 at night
2:30 in the afternoon

TIP: Here's a simple trick to learn 24-hour time. Beginning at noon and for every hour after til midnite add 12 to the time, put it in four digits and you have 24-hour time. Can you figure out how to put 24-hour time into "regular" time?

QUESTIONS: Which clock is based on the solar day?
 When do you say o'clock?
 Can you think of special vocabulary words we use when talking about time?
 Do you have a watch? What kind is it?
 Can you think of other ways people have kept time through history?
 Why do we have daylight savings time?

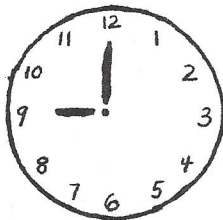
* * * * *

This is a tidetable from a chart or the daily paper. Can you find it in the newspaper? Why is it important to know the tides? What other information does this tidetable give you?

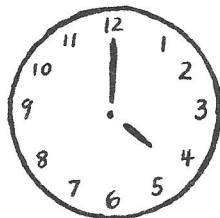
TIDES AT SAN FRANCISCO (Golden Gate), CALIFORNIA — 1981
 Pacific Daylight Saving Time (Heights in feet)

SEPTEMBER		Time and Height of High and Low Water							
MOON PHASES	Day	Time	Ht.	Time	Ht.	Time	Ht.	Time	Ht.
		Hi Water		Lo Water		Hi Water		Lo Water	
Equa.	Tue. 1	0144	5.2	0744	0.5	1434	5.2	2011	1.4
	Wed. 2	0228	4.8	0820	1.1	1503	5.2	2057	1.4
	Thu. 3	0317	4.4	0858	1.7	1535	5.1	2148	1.4
	Fri. 4	0418	4.1	0940	2.2	1612	5.1	2247	1.4
Apogee	Sat. 5	0534	3.8	1033	2.7	1658	5.1	2347	1.3
FIRST Q.	Sun. 6	0713	3.8	1139	3.1	1751	5.1	---	--
		Lo Water		Hi Water		Lo Water		Hi Water	
	Mon. 7	0055	1.1	0836	4.0	1255	3.2	1850	5.2
So. Equa.	Tue. 8	0155	0.9	0932	4.3	1401	3.1	1946	5.4
	Wed. 9	0246	0.5	1014	4.5	1452	2.9	2043	5.5
	Thu. 10	0331	0.2	1046	4.7	1537	2.6	2133	5.7
	Fri. 11	0410	-0.1	1118	4.9	1618	2.2	2219	5.8
	Sat. 12	0447	-0.3	1149	5.0	1656	1.8	2307	5.9
FULL	Sun. 13	0524	-0.3	1221	5.2	1736	1.4	2356	5.9
	Mon. 14	0601	-0.2	1253	5.4	1818	1.0	---	--

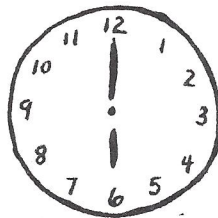
International Time -- The world is divided into time zones. The clocks below tell you what time it is in different parts of the world when it is 6:00 pm in San Francisco. Where would you see clocks like this?



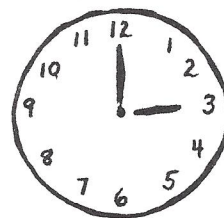
New York
9:00 pm



Hawaii
4:00 pm



Los Angeles
6:00 pm



Tokyo
3:00 am

EXERCISE: Design your own fort. Here are some questions to help you get started:

What materials will you use?

How will you get in and out?

How many men and cannon will it have?

Will you have room for other things like lighthouses, supplies, training and marching areas, stables, etc.?

Does your fort have a name?

Are you going to build it in a special place?

On a hill?

near the water?

near a river?

close to a city?

What will it protect? Why?

Who will pay for your supplies? Who will pay the workmen's salaries?

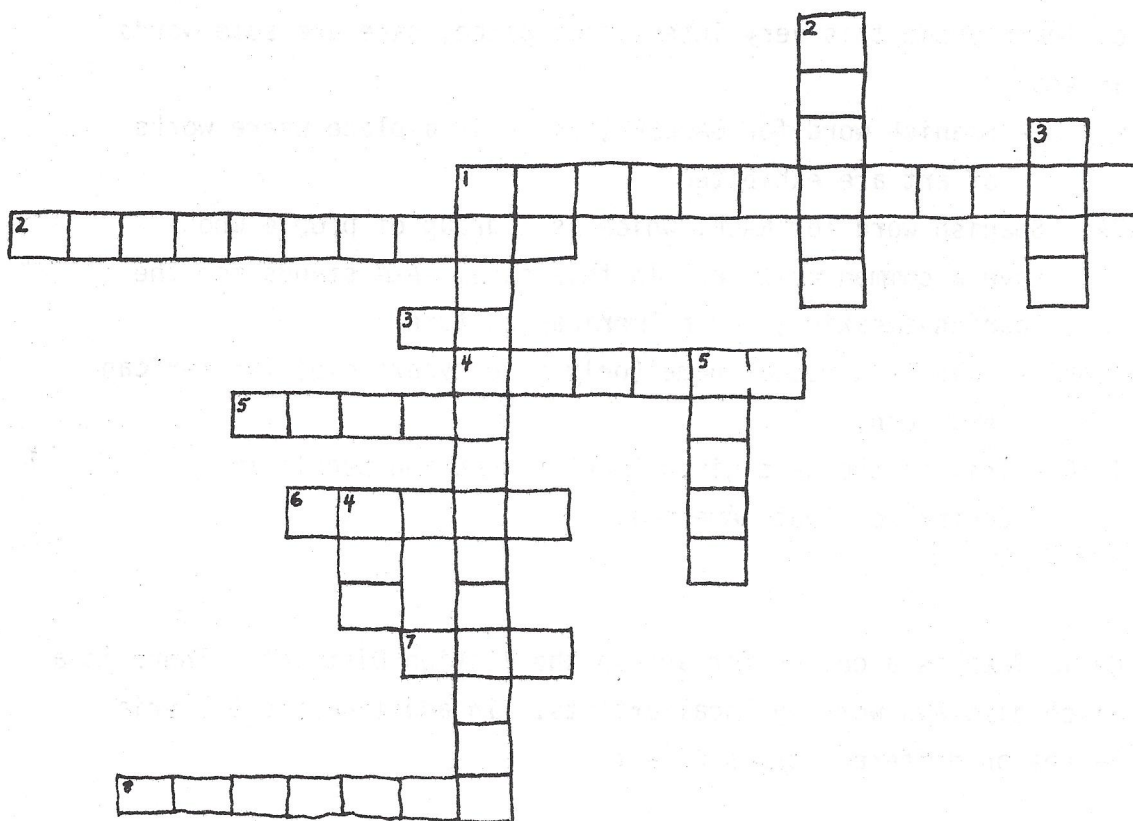
Where will you find workmen who know how to build a fort?

How will you get your supplies to your chosen location?

Do you think your fort would be useful in our modern day world?

AT SCHOOL OR HOME -- get a big piece of paper. Draw your fort.

GO TO THE BEACH -- with sand and other things you find on the beach
make a sandfort as you planned it above.

UNIFORM CROSSWORD PUZZLEACROSS

1. Place where enlisted soldiers kept their ammunition
2. What held their pants up?
3. Letters on belt buckle
4. Protection for shoulders
5. How many chevrons did a sergeant have?
6. Type of coat they wore
7. Number of feathers on hat
8. Name of their shoes

DOWN

1. Symbol for artillery found on hat
2. Name of the dress hat
3. Material from which uniform is made
4. Color used to mean artillery
5. Symbol on the breast plate

* * * * *

CLUES

eagle one scales three suspenders wool
 Hardee red cartridge box frock U.S. bootees crossed cannons

GALERIA DE LA RAZA

Before you learn about this very interesting place, here are some words you should know:

GALERIA - Spanish word for GALLERY, which is a place where works of art are exhibited.

RAZA - Spanish word for RACE, which is a group of people who have a common culture. In this case, RAZA stands for the Spanish-speaking, Latin-American culture.

CHICANO - This is a recent name (only a few years old) for Mexican-Americans.

LATINO - This is the name given Spanish-speaking people from Central or South America.

Galeria de la Raza is a center for art in the Mission District. There is a gallery which displays work by local artists. In addition, the Galleria offers classes on different types of art.

Some people come to the Galeria to buy posters and art supplies. Still others come to design and talk about large murals which they will paint on buildings. As you can see, Galeria de la Raza is many things to many people.

It was begun back in 1970, when a group of Chicano artists decided that the Mission District needed an art center. Many people were involved in doing art at that time, and they wanted to find a way to work together and get better organized. They founded the Galeria to help do this.

LOW RIDERS = ART?

Take a look at the Low Rider car which appears on the next page. Have you ever seen any cars around San Francisco that look like it? What do you think of cars like that? Do you like them? Think they're O.K.?

Now comes a harder question: Do you think a low rider car is a work of art? Is the picture of the car a work of art? Why or why not?

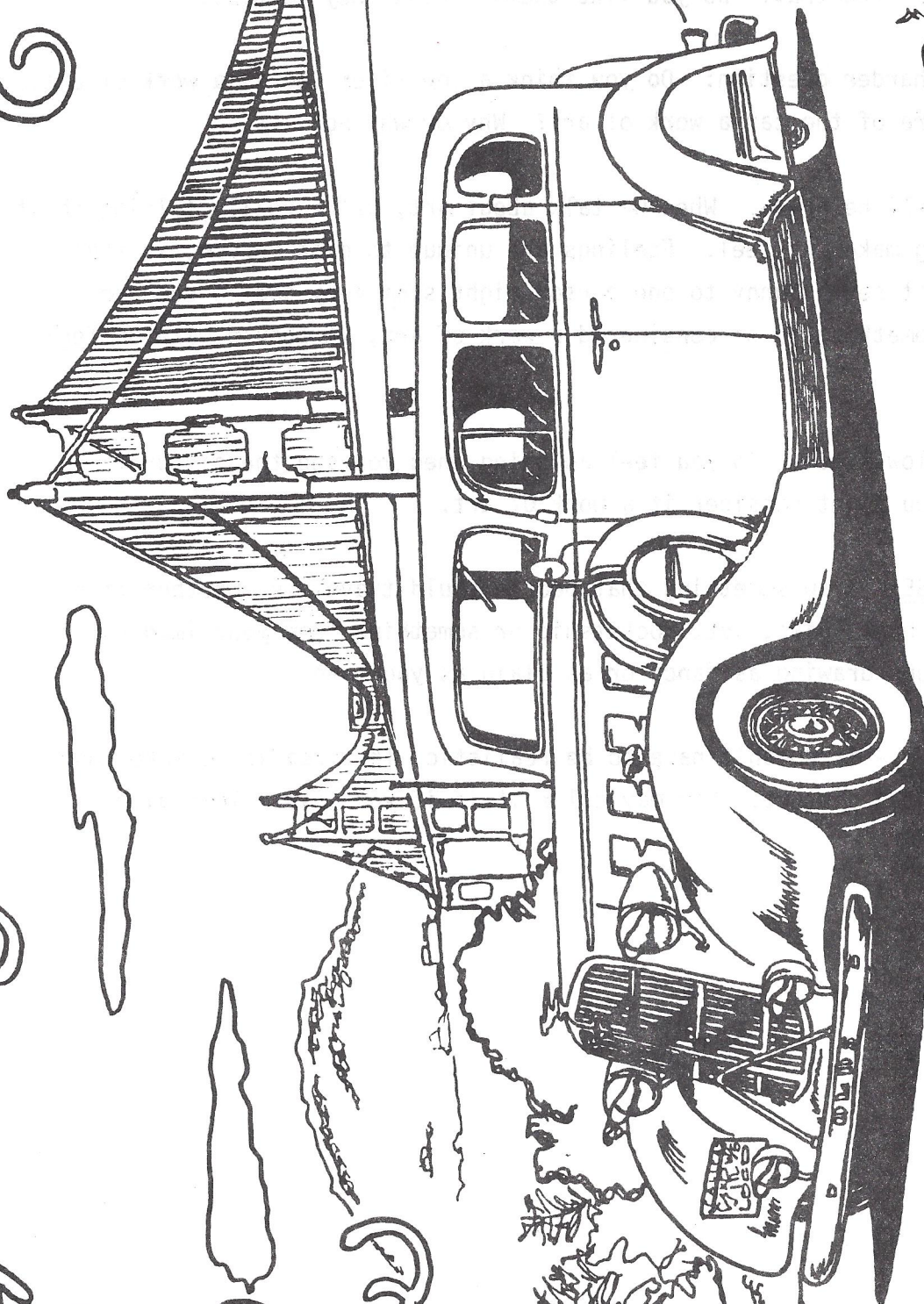
Maybe this will help you. When we talk about art, we're really talking about how something makes us feel. Feelings are unique to each person, so that something that seems funny to one person might seem very sad to someone else. For something to be considered a work of art, it should make us feel something.

Back to the low rider. Do you feel anything when you see the picture? If you do, you might consider it a work of art.

EXERCISE: Draw something that people could travel in, whether it's a car, boat, bike, jet, rocketship or something from your imagination. Make your drawing as fancy or as plain as you like.

Remember - it doesn't have to be realistic. The idea is to make your own unique picture. You may color it in if you like. Then give it a name.

— Puro San Fran —



by GLE LOCO
w/ 5" F" M'

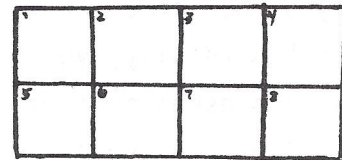
1934 OLDS FORMAL SEDAN
Series 460

SYMBOLS

One way that artists help the viewer to experience feelings is by using SYMBOLS. A symbol is something that stands for something else. It makes us think of the idea or thing that it represents. For Example, ☆ and † are symbols which represent Judaism and Christianity.

EXERCISE: Now that you know what symbols are, you can begin to make some of your own:

1. Take a blank piece of paper and divide it into 8 equal sections.
2. Number the sections from 1 to 8. In each box you're going to draw a different symbol. Try to make it so that someone else who saw your symbol would understand the idea behind it.
3. Box #1 - design a symbol for FRIENDSHIP
 Box #2 ----- WAR
 Box #3 ----- PEACE
 Box #4 ----- STRENGTH
 Box #5 ----- CITY
 Box #6 ----- ANGER
 Box #7 ----- HAPPINESS
 Box #8 ----- FIRE
4. When you have completed your symbols, trade with one of your classmates to share each other's ideas. Each of you can explain why you chose the symbols that you did. Then share your symbols with the class.
5. Think up 3 more ideas that you'd like to see in symbols and have one of your classmates draw them, while you draw his/hers.



MURAL ART

When we think of a painting, we probably think of something that hangs on the wall of our home, a gallery or a museum. Sometimes however, artists want to create a gigantic indoor or outdoor painting which would be seen by everyone passing by.

Instead of using canvas to paint on, they use a large wall or the side of a building. This type of painting is called a MURAL.

There are many beautiful murals in San Francisco. Have you ever seen one? Quite a few of them are in the Mission District and were painted within the last ten years.

Even today, more murals are being completed; helping to make our city even more beautiful. On your MURAL WALK, you may have had the chance to see how these paintings are changing the face of San Francisco.

When you look at a mural, try to understand what the artist is saying. If you look carefully, you can see different symbols which might tell a story or present an idea. Murals are more than just pretty colors on a wall. They are usually some kind of message from the artist.



by Ralph Maradiaga

BART Mural Section—Mike Rios

EXERCISE: Making a Mural

Materials: butcher paper, masking tape, felt tip markers
or chalk or tempera paints.

1. With a group of about 4-6 students, have a discussion to decide on a common interest for the "subject" of your mural.
2. Cut a piece of butcher paper to fit the area where your mural will be hung.
3. Lay the paper on the floor to work or fasten to the chalkboard with masking tape. (Make sure it's low enough so you can reach the top.)
4. Make some sketches and agree on what the whole mural should look like before you begin to draw on the butcher paper.
5. You might want to sketch the whole mural with pencils (on the butcher paper) so you can tell that all the space will be used the best way possible.
6. Now start coloring your mural with the pens, chalk or paint.

HINT: Keep the subject of the mural in mind as you draw!

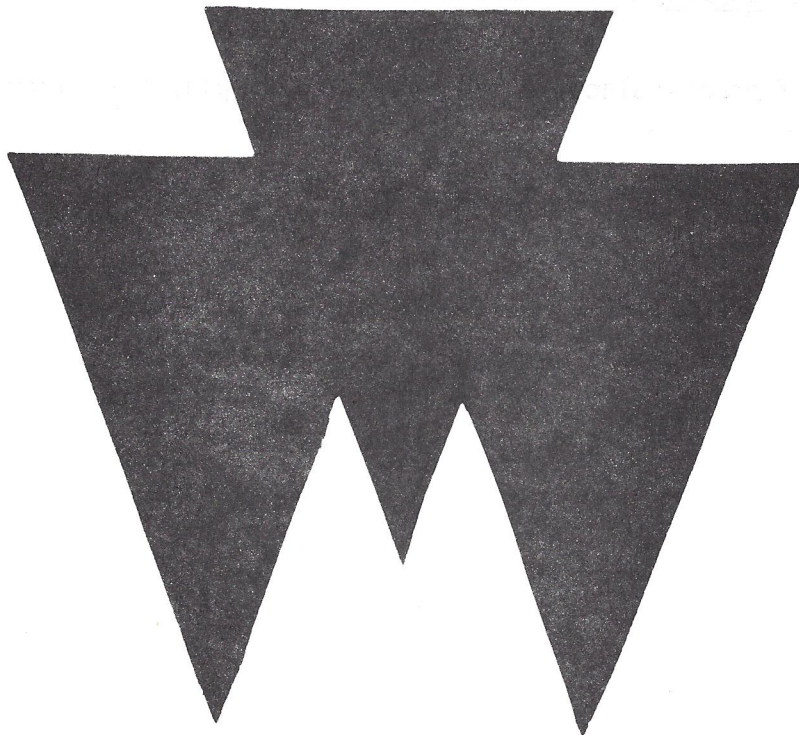
See if you can find someplace in the school to display your murals.

JOSEPHINE RANDALL JUNIOR MUSEUM

The Josephine Randall Junior Museum first opened its doors in 1937 and has been at its present location since 1951. Its purpose is to create an interest in life and the world around us. It is under the San Francisco Recreation and Park Department.

The museum has a large animal collection, a general wood and metal shop, a ceramic and weaving room. There is also an operating seismograph (look it up - if you don't know what it means!) center and a chemistry and biology lab.

The CALIFORNIA TREASURES program will concentrate on WEATHER and learning how to set up weather stations.



THE RAIN GAUGE

Here are two words you should understand very well before you make a RAIN GAUGE:

CALIBRATE - to set up a way of measuring something

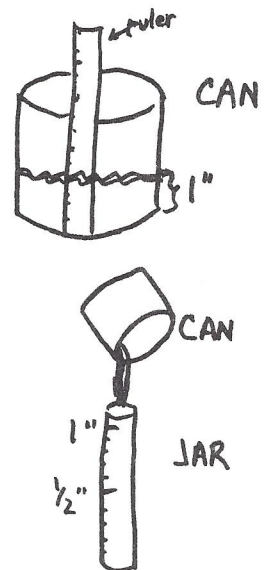
PRECIPITATION - Moisture (wet stuff) that falls from the sky;
rain, snow, clouds, hail.

PURPOSE: This instrument measures the amount of rainfall or precipitation. Any container with straight sides could be used by simply sticking a ruler into the water, removing it and seeing how far up it is wet. Simple. Almost simple. Unfortunately, it often only rains one tenth of an inch, which is hard to read. Fortunately, we have another way to measure the rainfall.

MATERIALS: A large coffee can, a ruler, a tall glass jar (like an olive jar) and a marker pen.

PROCEDURE:

1. Calibrate the glass jar by doing the following:
 - a. Pour one inch of water into the coffee can.
 - b. Pour the water from the can into the glass jar.
 - c. Mark on the glass the height of the poured water.
 - d. Divide this mark into 10 equal parts.
2. Leave the coffee can outside reasonably far away from any house, tree or anything that might block the can from the rain..
3. Once a day at the same time, check and see if there has been any precipitation
4. On days when there has been precipitation - pour the rainwater into the calibrated jar and record it on a piece of paper. You will get a Weather Chart at the museum.



rain gauge (cont.)

Rain, as we all know, comes from clouds. Therefore, it would be nice if we knew how to learn about the different kinds of clouds that bring rain.

CLOUD TYPES

There are different kinds of clouds. Clouds have two names: One name tells what their formation (shape) is like; the other one tells how high in the sky they are.

- Formations: 1. Stratus - layered clouds, sheets that cover the sky.
2. Cumulus - lines, groups, waves.

Both of these types of cloud formations are found at all levels of the atmosphere (air around us). Then comes the height part of the name:

Height:	1. High:	Cirro-Stratus	Cirro-Cumulus	4 miles
	2. Mid:	Alto-Stratus	Alto-Cumulus	1-4 miles
	3. Low:	Stratus	Strato-Cumulus	1 mile

Nimbus is attached to the cloud formation if it is a rain cloud.

Nimbostratus and Cumulostratus are the names of these kinds of clouds.

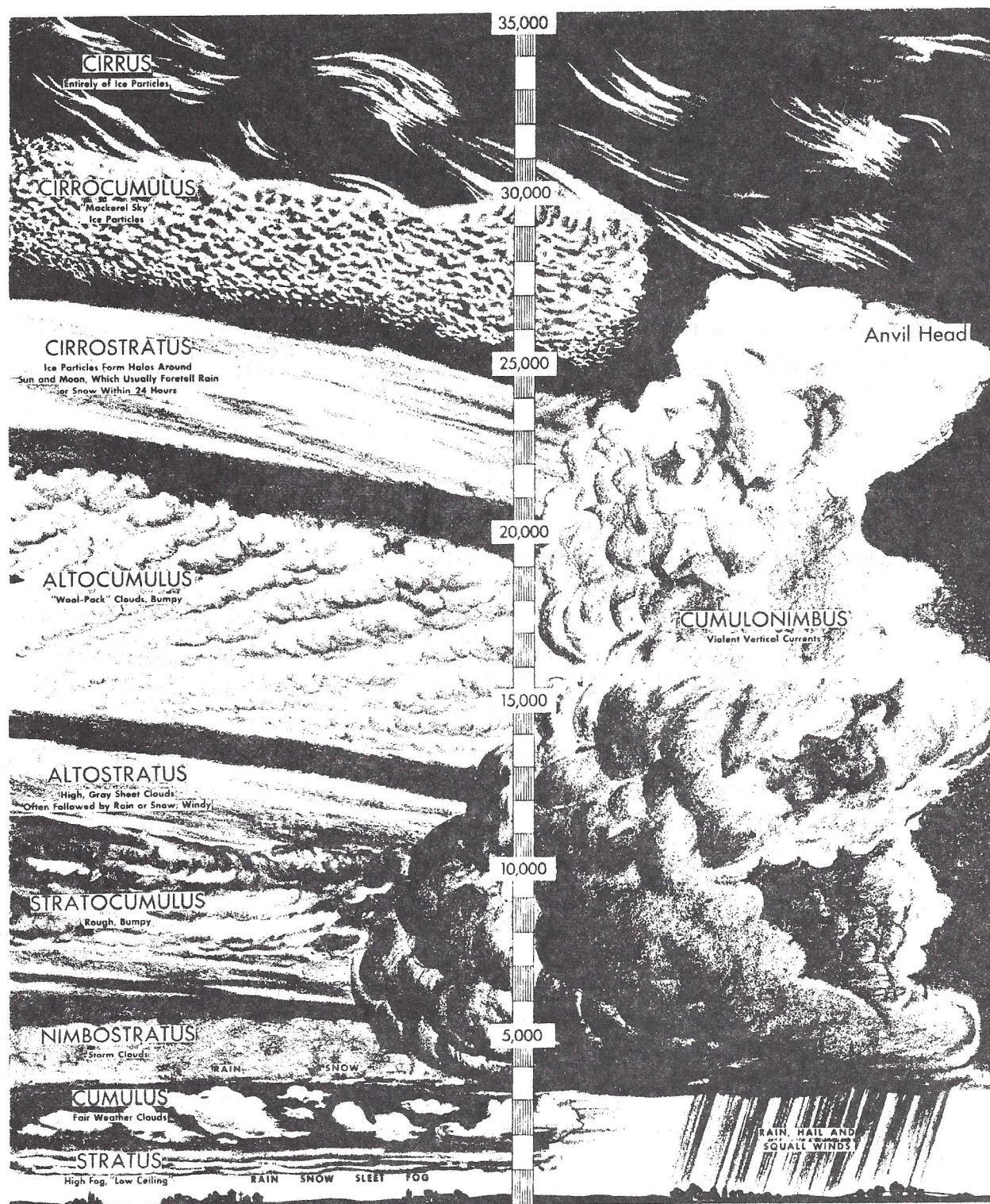


Figure 4.21 A very generalized vertical arrangement of cloud types. (From *Atmosphere and Weather Charts*, published by A. J. Nystrom and Company.)

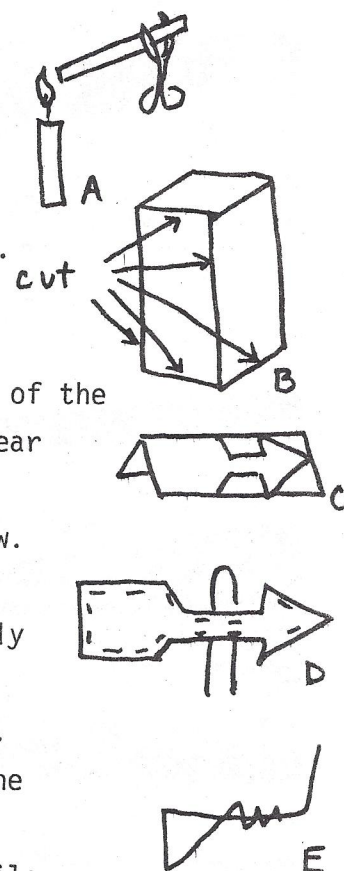
THE WIND VANE

PURPOSE: The weather or wind vane tells wind direction. The wind direction is an important piece of information to have when we predict the weather. The wind vane you will learn to make is based on one described by Herman Schneider in Everyday Weather and How It Works.

MATERIALS: A glass tube, a milk carton, a coat hanger, some paper clips, a pair of scissors, a pencil and a pair of tongs (grippers).

PROCEDURE:

1. Cut a 3 inch piece of glass tubing.
2. Using a pair of tongs to hold the glass tube, melt one end closed as shown in Picture A.
3. Cut the milk carton along each crease (Picture B). This will give you 4 large panels.
4. Take one panel and fold in in half lengthwise.
5. Draw the outline of an arrow on the unmarked side of the milk carton. The arrow should be larger in its rear part (Picture C).
6. Holding the two halves together, cut out the arrow.
7. Staple or tape the two arrows together. Slide the glass tube through the neck, stapling it firmly in place (Picture D).
8. Unbend and straighten hanger as seen in Picture E.
9. Our wind vane can be used in a couple of ways. The hanger may be fastened to something and left permanently, or the wind vane may be hand held while you notice the wind direction.



USE: The wind vane, as you have been told, tells us wind direction. It works because the back end of the wind vane, which is larger, catches more wind. The arrow points to the direction the wind is coming from.

the wind vane (continued)

Wind direction is important because STORM FRONTS usually come from certain directions. (Ask about STORM FRONTS when you go to the museum.) Fair (calm, nice) weather also comes from certain directions that can be predicted.

Below is a guide that tells about wind direction and the weather it brings. Keep in mind that it is only based on averages (what happens most of the time) and could be wrong on any one day. In other words, it works - usually.

WEATHER	WIND DIRECTION	SEASON	WHERE IT COMES FROM
Rain	W, SW, S	Winter	Pacific Ocean, Gulf of Alaska
Fair, cool	E, NE	Autumn	North America
Fair, warm	S, SE	*	North America
Fair, foggy	W	Summer	Pacific Ocean

*rarely happens

THE HAIR HYGROMETER

Learn these two words before you make your HAIR HYGROMETER.


HYGROMETER - something to measure amount of moisture (wetness).

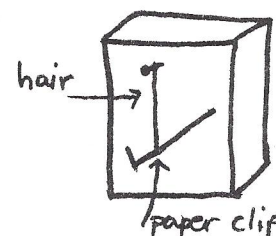
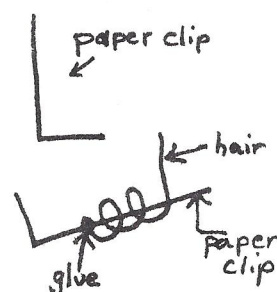
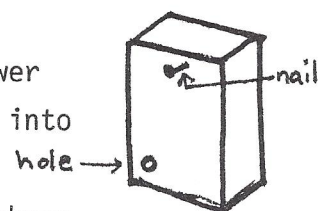
HUMIDITY - amount of water vapor (invisible gas) in the air.

PURPOSE: The hair hygrometer measures the moisture content, or the humidity, of the air. The humidity of our air is important to know as it can help us to tell whether our days will be wet or dry. It works quite simply: A piece of human hair attached to a penny will stretch on humid days and shrink on dry days. At the end of our exercise we will find out what it means when the hair stretches or shrinks.

MATERIALS: A piece of wood (at least 10 inches high- that will stand by itself, two thin nails, a paper clip, a strand of human hair (long and thick) and some white glue.

PROCEDURE:

1. Wash, clean and rinse the hair. 
2. Stand the wood on end, lengthwise.
3. Pound or drill a hole 1 inch deep into the lower left side. (You can pound a thin nail 1 inch into the wood and carefully pull it out.)
4. Pound a nail into the wood at least 7 inches above and 2 inches to the right of the hole that you just drilled. Leave the nail sticking out about $\frac{1}{2}$ inch.
5. Bend the paper clip into an L shape. The bottom of the L should be a little longer than 1 inch.
6. Place the short part of the L into the hole.
7. Carefully, without touching the hair too much, tie the hair to the nail. Put a drop of glue on it to make sure it stays in place.
8. Hold the paper clip up at a 45° angle ($\frac{1}{2}$ way between being flat and straight up). Loop the hair twice



hair hygrometer (cont.)

around the paper clip and then tie a knot with the remaining hair. Apply glue to the knot and the loop to the knot, leaving one loop free of glue.

9. Place the hair hygrometer on its base with the paperclip, etc... facing the ceiling and allow the glue to dry.

All done! Well, almost. The hygrometer needs to be calibrated (or marked) so that we can easily read it. Do it this way: Fill a pan with water, put it on the stove and bring the water to a boil. Hold the pan carefully underneath the hygrometer.

The air around the hygrometer is now 100% humid and the hair will be stretched as far as it can. Mark the place where the paper clip points to as - WET. Mark the place where the paper clip usually points to as - NORMAL.

Put it in a shaded, protected place where you plan to keep it. (The place should be outside so you will be sure to get a good reading.)

USE: Why is it important to know if the air contains moisture? Rain. Rain comes from water vapor or invisible moisture that is in the air. Our hair hygrometer can tell us how much of this invisible moisture is in the air. Knowing this can help us have some pretty good ideas about the chances for rain.

Imagine the air is a cup that comes in two sizes. Large and small. These cups contain invisible water vapor. On warm sunny days the large cup, which holds large amounts of water, is in the sky. On cooler days the small cup, which holds much less water is in the sky.

We now have a problem: What happens to that part of the water from the large cup that can't fit into the small cup?



hair hygrometer (cont.)

Can you guess? The left over water falls to the earth as precipitation (rain, snow, sleet or hail) and forms clouds in the sky. This is why it is important to know how much moisture is in the air.

To say that again in different words: Warm air is able to hold a lot of invisible water vapor or moisture. (We can't see it but we know it's there.) Cold air is not able to hold as much of the invisible water vapor as warm air.

If the air gets cooler- the extra water vapor has to go somewhere--- Down it goes, falling to the earth as rain or snow and as clouds.

EXPLAIN THE IDEA DESCRIBED IN THE TWO PARAGRAPHS YOU JUST READ TO A STUDY PARTNER. THEN HAVE HIM/ HER EXPLAIN IT TO YOU. DRAW A PICTURE THAT SHOWS WHEN IT MIGHT RAIN.

We now know that if we have plenty of water vapor in the air AND if the air is cooling quickly - there will be some kind of precipitation (rain, etc.). An easy example of this happens when we go outside on cold days. Every time we breathe... out comes a cloud. Warm air has been quickly cooled to make precipitation.

CAN YOU THINK OF WAYS IN WHICH AIR CAN BE QUICKLY COOLED?

Our hygrometers measure the moisture of the air by hair stretching when the air contains a lot of moisture and shrinking when the air has less moisture. Here is how the hygrometer will usually work:

	<u>Before</u>	<u>During</u>	<u>After</u>	Storm Fronts
Needle shows:	Normal	Wet	Back to Normal	Water Vapor Content

hair hygrometer (cont.)

In San Francisco, the readings normally depend on wind direction, when there is no precipitation.

1. From the continent (huge land mass where we live- North America) we get cool dry winds that bring us dry weather. These winds are from the NE or E.
2. From the ocean we get warmer moist (wet) wind that bring us wet weather. These winds are from the SW or W.

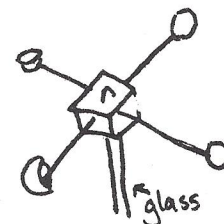
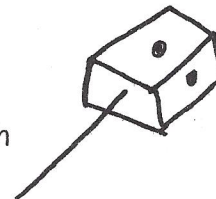
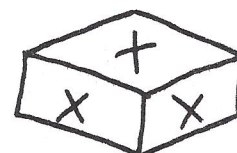
THE ANEMOMETER

PURPOSE: The anemometer tells us wind speed.

MATERIALS: A rubber bottle stopper (chemi type, 2 inches across) or a small square of (1" x 1", $\frac{1}{2}$ " thick) or a piece of styrofoam about the same size, 4 thin sticks of 8" wood (toy kit size is perfect), a glass tube about the size of a medicine dropper, a hanger, glue and 2 ping-pong balls.

PROCEDURE:

1. Using a pair of tongs (grippers) to hold the glass tube, melt one end closed over an open flame. Do this only in the presence of an adult!
2. Take your center piece (the rubber stopper, wood or styrofoam) and mark 4 X's, one on each side. On the top in the center mark another X.
3. If your center piece is rubber or wood, have your teacher drill a hole $\frac{1}{2}$ " deep and slightly larger than the wooden sticks in each side X. Have your teacher then drill a hole slightly larger than the glass tube all the way through the top X.
4. Apply glue to one end of each 8" stick. Ease the sticks into each of the side holes and allow the glue to dry. If the holes are too big, wipe off the glue and wrap enough masking tape around the end to give the stick a snug fit. Reglue and allow to set.
5. Cut each ping-pong ball in half. Carve a small C into one side. Glue one of these halves onto each stick as shown in the picture.
6. Take the cooled glass tube, apply some glue to its tip and ease it through the center hole. If the hole is too big, use the masking tape as in Step #4.
7. Unbend the hanger the same way we did for the Wind Vane. Place the glass tube on the hanger's upright end and we're done.



anemometer (cont.)

USE: An anemometer gives us a couple of pieces of information: How fast the wind is blowing and, when used with the BEAUFORT SCALE*, the effect of wind on our environment. To figure out the wind speed do the following:

1. Brightly color one of the ping-pong balls using either a water proof marker or paint.
2. Count the number of turns that the anemometer makes in 30 seconds.
3. Divide this number by 5. The resulting number is the approximate wind speed in miles per hour.

*An Englishman named Beaufort observed that wind does different damage at different speed. He then created a scale, the BEAUFORT SCALE, based on his observations. The Beaufort Scale goes from 1 (wind speed less than 1 mile per hour) to 12 (wind speed above 75 miles per hour).

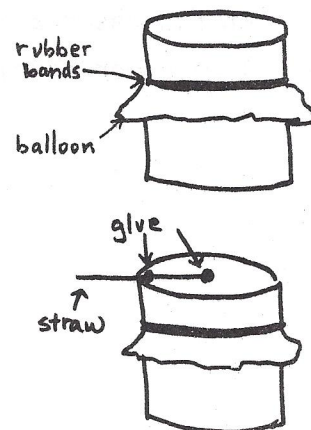
THE BAROMETER

PURPOSE: Barometers measure the pressure of the air or how heavily the air is pressing upon us. It shows us that cold air is heavier and pushes with more force than warm air. Therefore, by reading the barometer we can tell when cool sinking air or warm rising air is coming.

MATERIALS: An empty tin can, glue, a small sheet of plastic or a balloon, a broom straw, a ruler and rubber bands.

PROCEDURE:

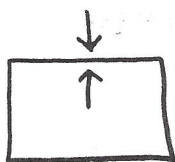
1. Cut a circle in the balloon about 2 inches longer than the mouth of the tin can.
2. Stretch the plastic, without wrinkling it, over the mouth of the can and fasten its edges with rubber bands.
3. Lay the straw across the top of the can so that it roughly divides the balloon in half. One end of the straw should stop at the center of the can. Put glue on the straw as shown in the picture.
4. Keep your barometer in a place that stays pretty much the same temperature.
5. Every day at the same time, measure the height of the end of the straw and record it.



USE: Barometers are sensitive to changes in pressure. Pressure is the force we feel from the weight of the air on top of us. (An easy way to remember pressure is the pressing of the air upon us.) Our barometer shows us two pressures, the outside air pressure and the air pressure of our sealed can. When the outside air pressure is equal to the air pressure of our sealed can, the balloon will be flat (Picture #1). If the outside air pressure is greater, the balloon will curve down (Picture #2). If the outside air pressure is less, the balloon will curve upward (Picture #3).

barometer (cont.)

#1

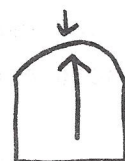


EQUAL

#2

OUTSIDE
GREATER

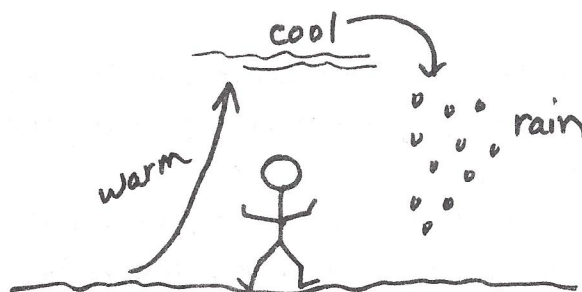
#3

OUTSIDE
LESS

Knowing whether we have low outside air pressure or high outside air pressure is very important for weather forecasting.

We discussed earlier that the most important thing for rain is that the air must cool quickly. (To refresh your memory about this fact, review the use of the hair hygrometer.) Rising air, moving upwards from the earth, will cool very fast.

The times when we have low pressure, the air is rising and cooling and the balloon will be curving upwards. That's how we get rain.



MEXICAN MUSEUM

The Mexican Museum, first of its kind outside of Mexico, opened its doors on November 20, 1975, after five years of preparatory work by Peter Rodriguez, its founder and Executive Director.

The main goal of the museum is to help people learn more about Mexican and Mexican-American art and culture.

One of the ways we can learn about a group of people is by studying some of their treasures.

THE CODICES AS TREASURES

The codices are "painted books" that tell about the pre-Hispanic (ancient Mexican) and post-Hispanic (more recent Mexican) historical and religious activities. They were drawn mainly by the Aztec, Maya and Mixtec Indian groups. Events in the codices are described by means of images, symbols and hieroglyphs on deer skin or tree bark paper.

These books are treasures in a way similar to paintings and jewels. They were placed in Aztec graves.

EXERCISE: Look at Codice #1 and answer the following questions:

1. Why do you think the Aztecs considered the codices to be treasures?
2. Why are they considered treasures to us today?

Here are some things to do to help you understand Codice #1:

- a. Aztec numbers - Each tiny round circle in the border frame equals one. ooo = 3.
- b. Aztec calendar - 20 days in the month, with a 20-month year. Each day had a picture symbol. There were 5 days left over which were thought to be lucky days.

- d. Aztec writing- Pictures were used to make words instead of letters. Examples: Burning temple = conquest, shield = war, symbols attached to heads of chiefs = names.

EXERCISE:

1. Look at the symbols attached to the chiefs' heads in Codice #1. What do you think some of their names might be?
2. Now make up and adopt an Aztec name for yourself. Write your new name in picture form.

Examples:



3. With one or two other students, write a short story using picture writing. See if someone else can "read" it.

Look at Codice #2 and answer the following questions:

- a. What materials were used to make a warrior's clothing?
- b. Why do you think warriors dressed to look like animals?
- c. What purpose does a shield serve?
- d. Why is each shield decorated differently?
- e. What does a modern soldier wear in battle today?

EXERCISE: Imagine you are designing a uniform for a group of soldiers about to fight a battle in the jungle. What would it look like? What materials would you use? Why? Draw a picture of it and show it to your class.

In Codice #3 a mother is teaching her daughter how to make and cook tortillas. Can you find the following items in the Codice?

comal - clay griddle used for cooking

metate - grinding stone for corn used to make tortillas

tortillas - thin, flat, round cakes made of ground corn, water, lime

olla - a round clay pot used for cooking or storage

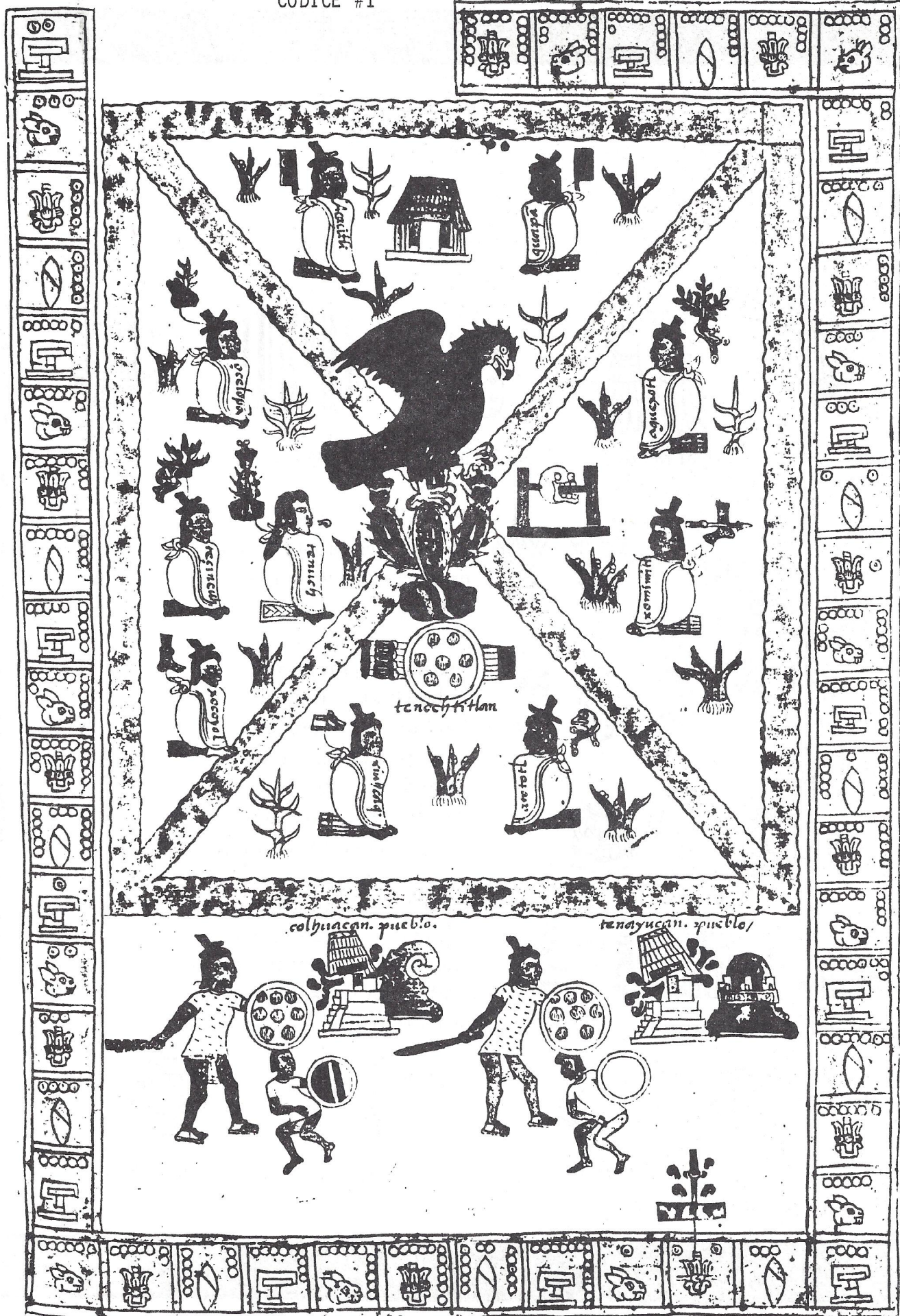
bracero - a coal-burning, portable stove made of clay.

EXERCISE: Draw pictures of tools used in your home for sewing, cooking, repair work. How are these tools like the ones used by the Indians to do the same things? How are they different?

Now draw pictures of the tools you used to draw your pictures. How are they like the tools used for picture writing by the Indians? How are they different?



CODICE #1





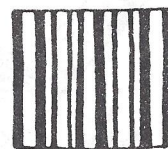
feathers



royal headgear



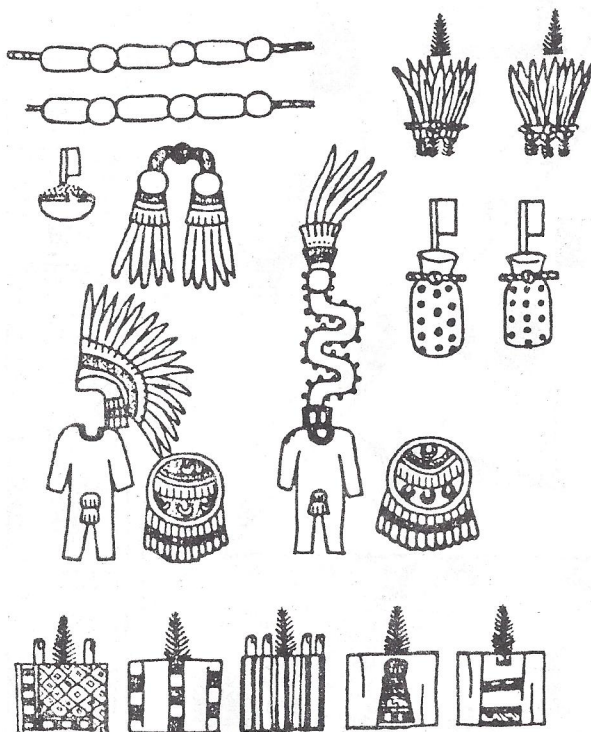
cochineal dye



blanket



shield



Tribute was stored, and records were kept in which number signs were combined with signs for things. The haul recorded here contains: 2 strings of jade beads, 20 bowls of gold dust, 800 bunches of feathers, 40 bags of cochineal dye, 2 warrior's costumes, 402, 400, 404, 400, 400 blankets of various patterns. The number 8,000 does not occur here, but in the picture on page 21, where the number 20,000 is represented by two symbols for 8,000 and ten symbols for 400.



1

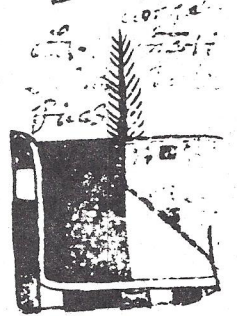
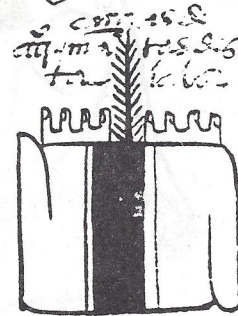
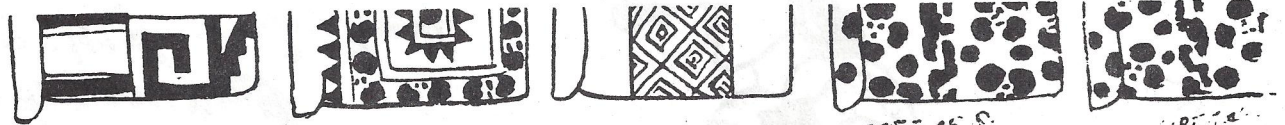
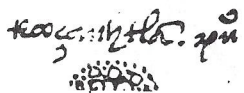
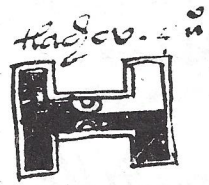


20

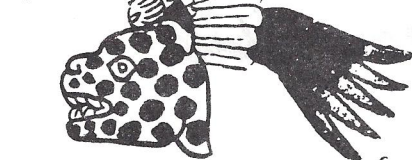
 $20 \times 20 = 400$ 

404

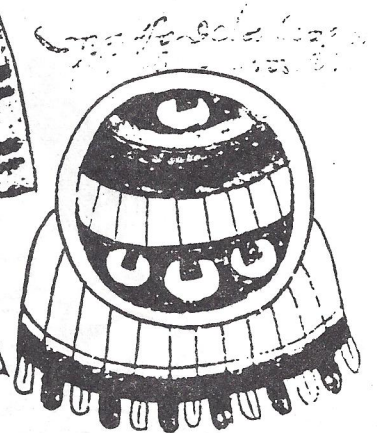
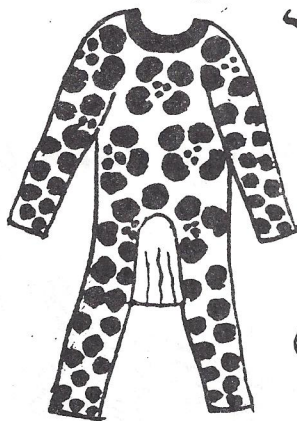
 $400 \times 20 = 8,000$



una pieza de armas de azules
fichas sexta divisa



una folsa de armas
fichas sexta divisa



This is a visual record of tributes the Aztecs collected from their subject people. It was painted on bark paper.

Every eighty days tribute was collected. Such tribute included animal skins, costumes, birds, fabrics, and food.

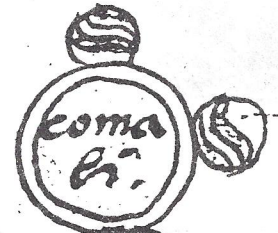
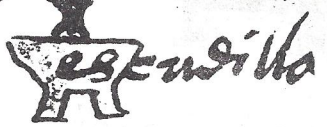
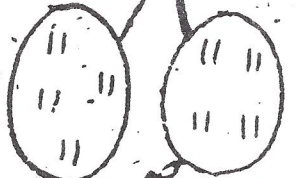
de. xiiij. añ / m. de los molinos
a en coma / esta fazera.

2

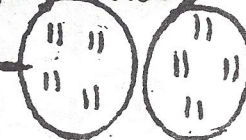


molidada de. xiiij. añ esta
moliendo torti
y moliendo en

dos torti



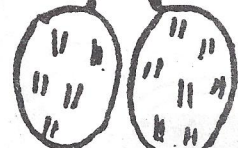
tortillas



olla y bato

3

dos tortillas



de. xiiij. añ esta texiendo



tela esta texiendo

Most girls' education concerned domestic tasks. A mother teaches her daughter to grind corn and to use the loom.

EXERCISE: Bring one of your own personal treasures to school to make up a museum in your classroom.

- a. When was it made?
- b. Was it made by you, a machine, someone you know, someone you don't know or some other way?

EXERCISE: Imagine you are either an Aztec ruler, warrior, artist, mother or child. Write a story describing an exciting or important happening in your life.

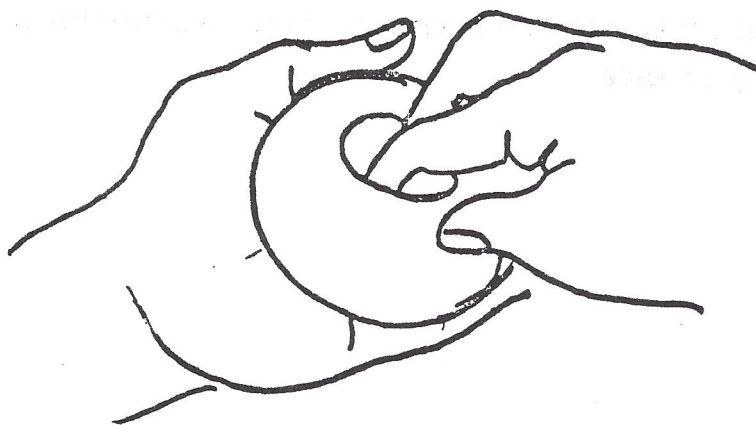
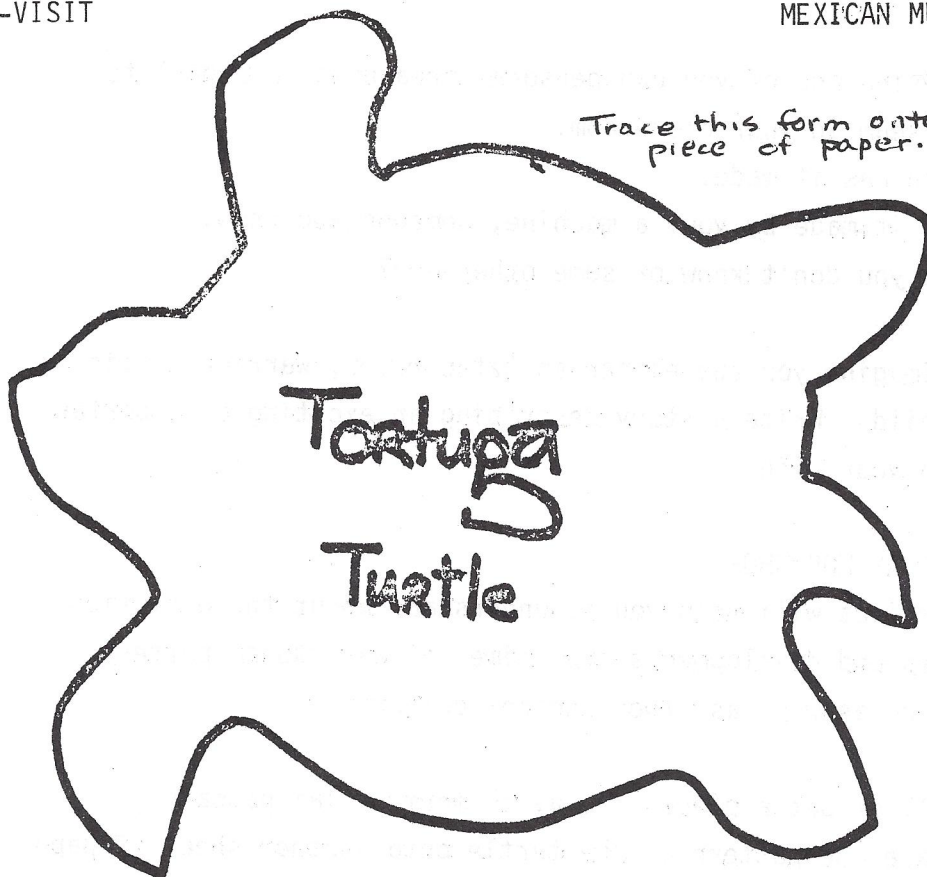
EXERCISE: CLAY WORKSHOP

This project will help you to understand about the evolution (changes and developments over time) of ways to do pottery in Mexico as well as other ancient cultures.

1. Roll or pat a piece of clay to form a flat pancake.
2. Trace the pattern of the turtle onto another sheet of paper.
3. Cut out your turtle pattern - not the one in the book!
4. Place the pattern on top of clay and trace around the outline of the turtle with a sharp nail until clay shape is cut out.

The earliest pieces of Mexican ceramics were flat, cookie-shaped figures like the ones you just made.

Trace this form onto another
piece of paper.



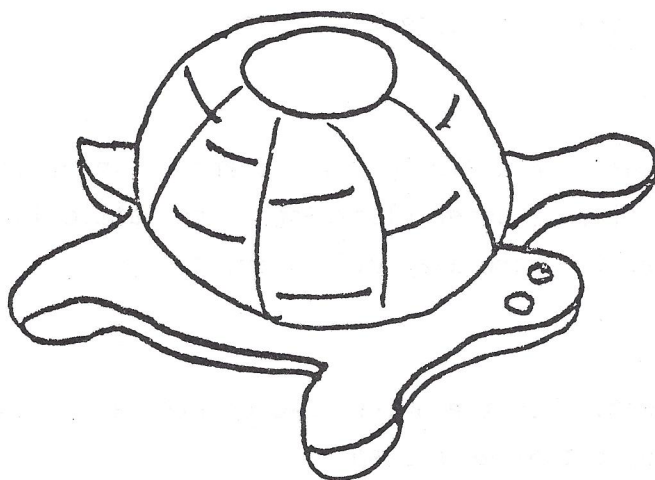
Now it's time to make the shell of the turtle.

5. Roll between your palms a smooth clay ball about half the size of a tennis ball.
6. Stick your thumb in the middle of the clay ball.
7. Put two fingers in the hole you started.
8. With the two fingers inside the ball and the thumb outside, pinch the wall of the ball while turning it evenly in one direction. This will widen the hole and make the walls of the "pinch pot" thinner.
9. Continue until your "pinch pot" is big enough to fit on the back of the turtle.
10. Wet the bottom of the pot and attach it to the middle of the flat shape.
11. Push on the pot to make its bottom flatten.

This way of making pots was the next step in ceramic evolution -- from flat to hollow shapes.

12. Now decorate your turtle by using a stamp or adding balls or coils of clay to the back.

Is your piece like any of the ones you saw at the museum?



"La Danza de la Pluma" (The Dance of the Plumes) has been performed in Mexico since ancient times; long before the Spanish arrived there. First, it was performed in honor of the sun. It is still danced in several parts of Mexico, especially in the state of Oaxaca during Catholic religious festivals.

Dancers wear headresses of brilliantly colored feathers decorated with mirrors. (The mirrors represent the sun.)

EXERCISE: DANCE WORKSHOP

The dancers can be arranged in a half-circle, in two lines or in a scattered pattern. All steps can be done by the group all together to 8 counts, or they can be danced in different orders for as many counts as they like.

Step 1

Each dancer kneels on one knee and jumps upright on two feet using one count for each step. This is done turning clockwise in the direction of the four CARDINAL POINTS.

(The CARDINAL POINTS are North, South, East and West

Pre-Hispanic dancers bowed to the four cardinal points, or the four winds, for protection.)

The dancer, whose headress is decorated with mirrors to stand for light, represents the sun.

The rattle is shaken to accent each step.

Step 2

Each dancer turns in a circle while standing in place. First, go clockwise, then counter clockwise. The rattle is made to quiver to scare away evil spirits.

Step 3

Hop on one foot, then the other- two counts each. Shake the rattle to accent the beat of each step.

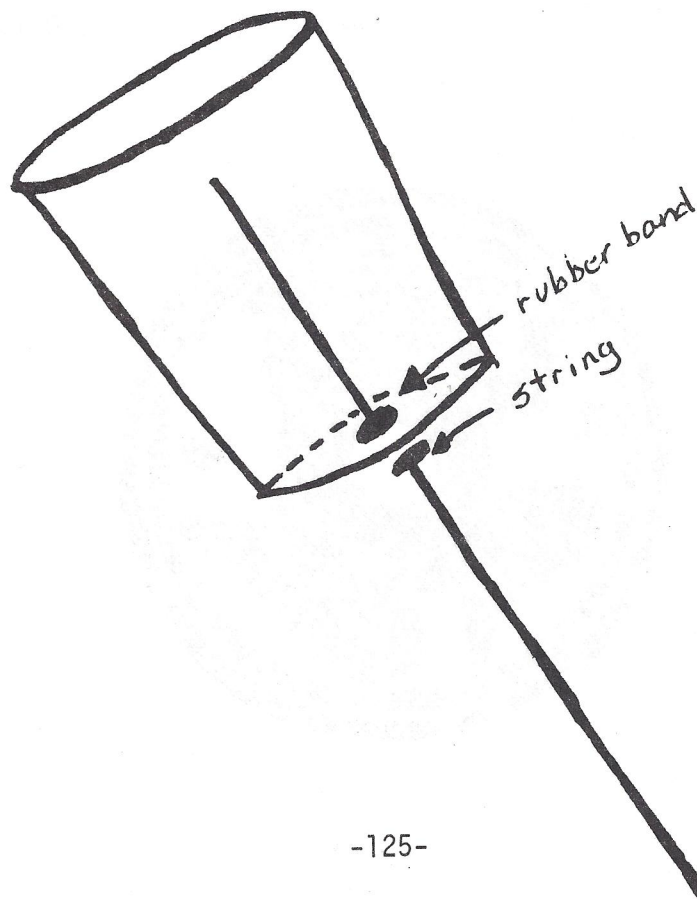
Step 4

Now make up your own dance steps and combinations.

EXERCISE: MAKING A RATTLE

Materials: 1 styrofoam cup, 1 cardboard circle the same size as the cup opening, 1 chopstick, string, 3 tablespoons rice, beans or small stones, scotch tape, 2 strips of colored tissue or crepe paper, 1 rubber band and glue.

1. Wrap a rubber band around the chopstick about $2\frac{1}{2}$ inches from an end.
2. Punch the other end of the chopstick into the center bottom of the cup until the chopstick is stopped by the rubber band.
3. Wrap and tie string around the outer end of the chopstick until the stick is firmly anchored inside the cup.
4. Place rattling material (rice, beans or small stones) in the cup.
5. Fit lid on the top and anchor firmly with scotch tape across the top.
6. Using glue, wrap the cup with strips of colored tissue or crepe paper for decoration.



The true artist: capable, practicing, skillful; maintains dialogue with his heart, meets things with his mind.

The true artist: draws out all from his heart, works with delight, makes things with calm, with wisdom, works like a true Toltec, composes his objects...invents, arranges materials, adorns them, makes them adjust.

Aztec, Central Mexico, 1200-1500 A.D.



MISSION DOLORES

Mission Dolores is a church which stands at the corner of 16th Street and Dolores. As one of the oldest buildings in San Francisco, it is a link between the present and a very interesting past. The building was begun in 1781, just five years after the birth of the United States. From then until now, Mission Dolores has seen San Francisco grow from a tiny settlement into a large, bustling city.

In the early days, the area around San Francisco was ruled by Mexico, although most of the people living here were Native Americans (Indians). Beginning in the 1700's, groups of Mexicans and Spaniards from Mexico began traveling through California, bringing with them the teachings of Christianity. These people, called missionaries, wanted to teach the ideas and practices of Christianity to the California Indians. The settlements (small villages with churches) were called MISSIONS. Many Indians helped the missionaries build the settlements. The ceiling of the Mission Dolores shows original Indian designs, done with vegetable dyes. Be sure to notice it.

Slowly and surely, a chain of missions grew up the California coastline. Each mission was about one day's journey from the previous one. In this way, a group of missionaries could travel by day and have a safe place to spend the night.

A man by the name of Father Junipero Serra was in charge of the California Mission System. He traveled back and forth to all the Missions, making sure everything was in order. He visited Mission Dolores four times, and in his honor a large statue was built. On your visit to the Mission, you'll see this beautiful work of art.

Each mission in the system is named after a saint. In Spanish, the word for saint is either SAN or SANTA, depending on whether it's a man or a woman saint. The real name of Mission Dolores is Mission San Francisco de Assis (after Saint Francis of Assisi). The name Dolores is



THE
OLD MISSION

PRE-VISIT



Father President of the California Missions, 1769-1784

MISSION DOLORES

only a nickname. When you visit the Mission, you may want to ask why this nickname is used.

Questions to think about:
How many places can you think of in California that begin with San or Santa? Write down as many as you can. Can you translate any of the names? Take a look at a map of California to see some more that you didn't know about.

EXERCISE: Imagine that you were traveling in a group of missionaries. Your job was to pick the best location in which to build a new mission.

1. Draw the type of place you think would be perfect. Take your time and do the best you can.
2. On the back of your drawing, list some of the reasons why your location would be a good one.
3. When the drawings are completed, look to see what some of your classmates' ideas were.
4. Do you think San Francisco was a good place for a settlement? Why or why not?

Take a look at these names:

ARGUELLO GUERRERO

SANCHEZ MORAGA

NOE VALENCIA

DE HARO

Are any of them familiar to you? You may recognize them as the names of San Francisco streets. Perhaps one or more of you might even live on one of them. The people after whom these streets were named are all part of the early history of San Francisco.

Among the people on that list are important land owners, 2 mayors and even a governor!

All of these people, as well as many others, are buried in a cemetery by the side of the church. There you will find many beautiful statues and works of art. There also, you can wander among the tombstones and read about many people who lived and died here up to two hundred years ago. It's quite an interesting place.



THE CEMETERY

EXERCISE: History Hunt

1. On a piece of paper, make a copy of the list of names from the top of the previous page.
2. When you visit the cemetery, see how many of the names you can find. When you find one, jot down when the person lived and something that is written about him.
3. Can you find who were the mayors and who was the governor?
(Hint: In Spanish, the word for "mayor" is "alcalde."
"Governor" is "gobernador.")

NOTE: Please remember not to run in the cemetery. It's fine to have fun during your history hunt, but you must show proper respect. O.K.?

EXERCISE: Make a Rubbing

This is an easy way to bring a little history back to your home or classroom. All you will need is several large sheets of paper, a few crayons and some masking tape to hold the paper in place.

1. Find a tombstone that you like and tape a sheet of paper to the front of it.
2. With the side of a crayon, carefully color in the paper and watch the image of the tombstone appear. (Be careful not to mark the stone itself.)

You will see a number of treasures at Mission Dolores. One of them is a book called the BOOK OF RECORDS. In it is a record of every BAPTISM which was performed there.

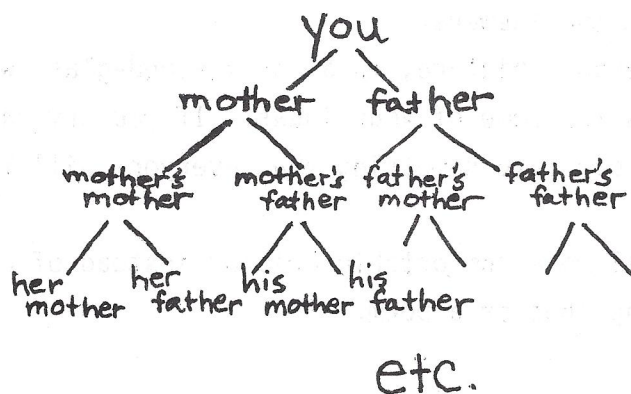
A BAPTISM is a religious ceremony where someone (usually a baby) "enters" the Catholic Church by being purified with Holy Water and blessed by a priest.

The BOOK OF RECORDS tells who was baptized, who the parents were, when the ceremony took place and who performed it. It's like a diary that runs for two hundred years. Someone whose family has been in San Francisco for a very long time might look in the Book of Records to find out the name of his or her great great grandmother!

EXERCISE: A Family Tree

Do you know who your ancestors were? (If you don't know the meaning of the word "ancestor", you better find out now!) Do you know what country they came from? One way to learn about your family is to make a family tree. To do this, you'll probably need help from your parents, or better yet - if you can - from your grandparents.

1. Start by writing your name at the top of the paper. You're going to be the highest branch.
2. Under your name, draw two lines and write in the names of your mother and father (see picture).
3. Under their names, try to write in the names of their parents.



Some of you probably live with only one parent. That's very common nowadays. If that's the case, just fill in as many names as you can.

- Tips:
- Try to use the maiden names (names before marriage) of the women in your family. That way you can learn about their families.
 - If someone came from another country or state, you can write that information on your tree.
 - Don't forget to ask uncles and aunts. Sometimes they might know a lot about your family.

The people who founded Mission Dolores two hundred years ago, were men and women who had a strong belief in what they were doing. Because of their strength and their energy, they had a large effect on the history of California.

Now we're in the 1980's and the world is quite a different place. How can we carry on the same kind of thing these people did long ago? What can we do to make the world a better place?

EXERCISE:

1. In groups or as a class, discuss these questions and write down some of the answers.
2. Design and draw a picture, mural or stained-glass window which stands for some of your ideas. If you try hard enough, you can make something that everyone will like.

Or... If you feel more comfortable writing instead of drawing, write a few paragraphs or a poem.

MUSEO ITALO AMERICANO

The people who live in Italy are called Italians. Some people live in big cities and others live in the country. They speak a language called Italian. Like people from different parts of China, Italians from different areas of Italy speak different kinds of Italian.

Many Italian words are words that we use in our English language. See how many of the words listed below you can recognize. These are all Italian words:

PIZZA	SALAMI
RADIO	OPERA
AUTOMOBILE	PASTA
TEMPO	PICCOLO
BROCCOLI	INFLUENZA

Here are the Italian words for numbers one through twenty:

1 = uno	6 = sei	11 = undici	16 = sedici
2 = due	7 = sette	12 = dodici	17 = diciassette
3 = tre	8 = otto	13 = tredici	18 = diciotto
4 = quattro	9 = nove	14 = quattordici	19 = diciannove
5 = cinque	10 = dieci	15 = quindici	20 = venti

EXERCISE: Here are some mathematics problems. See if you can do them in Italian:

- | | |
|-------------------------------|------------------------------|
| 1. uno + otto = ____ | 6. sette x due = ____ |
| 2. venti - tredici = ____ | 7. nove + sette = ____ |
| 3. quattro x tre = ____ | 8. quattordici - nove = ____ |
| 4. cinque + sei = ____ | 9. dieci x uno = ____ |
| 5. diciassette - sette = ____ | 10. tre + sedici = ____ |

Make up some of your own problems and give them to a friend.

Around the year 1900, many thousands of Italian people left Italy and came to the United States. The Italians who came had many occupations; like farming and fishing. They left Italy because the taxes were very high. They had to pay the taxes or give up their land. They decided to come to America and start new lives.

SOME FAMOUS ITALIAN-AMERICANS

(Crossword Puzzle Information)

Alioto, Joseph - Second Italian-American Mayor of San Francisco, California.

Andretti, Mario - 1940 — One of the best race car drivers in the world.

Belli, Melvin - 1907 — Famous lawyer of civil and criminal cases.

Brumidi, Constantino - 1805-1880 - Painter called the "Michelangelo of the U.S. Capitol".

Bufano, Beniamino - 1898-1970 - Modern sculptor living in San Francisco, California.

Caruso, Enrico - 1873-1921 - Opera singer - most famous tenor.

Di Maggio, Joe - 1914 — Famous baseball player with the New York Yankees.

Durante, Jimmy - 1893-1980 - Comedian of vaudeville, radio, T.V. and movies.

Fermi, Enrico - 1901-1951 - Scientist known as the "Father of the Atomic Age".

Giannini, Amadeo P. - 1870-1945 - A banker - founder of the Bank of America.

Grasso, Ella T. - 1919. First Italian-American Governor of the U.S. Governor of Connecticut.

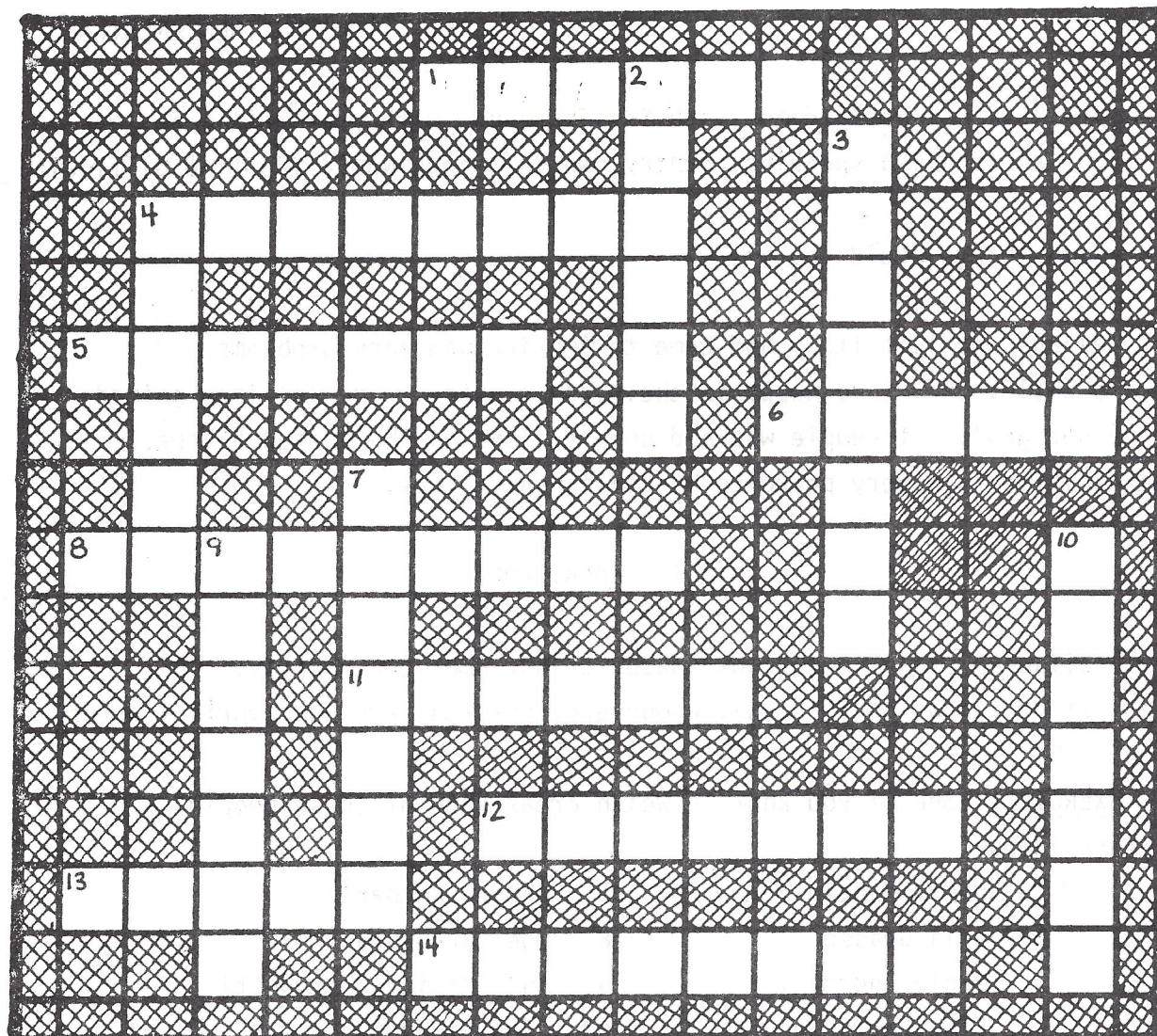
Mancini, Henry - 1924 - Writer of music and film scores.

Marconi, Guglielmo - 1874-1937 - Inventor of the wireless telegraph.

Sinatra, Frank - 1915 - Actor and singer of popular music.

Toscanini, Arturo - 1867-1957 - Famous symphony orchestra conductor.

ITALIAN ~ AMERICANS



ACROSS

- 1 Modern sculptor.
 4 Banker - Founder of the Bank of America.
 5 Writer of music and film scores.
 6 Lawyer of civil and criminal cases.
 8 Symphony orchestra conductor.
 11 Opera singer - tenor.
 12 Painter - "Michelangelo of the U.S. Capitol".

- 13 Scientist - "Father of the Atomic Age."

- 14 "Yankee" baseball player.

DOWN

- 2 Mayor of San Francisco.
 3 Race car driver.
 4 Governor of Connecticut
 7 Inventor of the wireless telegraph.
 9 Actor and singer of popular music.
 10 Comedian of radio, T.V. and movies.

EXERCISE: If you had to leave San Francisco with your family and go to a non-English speaking country, which things would you find difficult?

Which things would you enjoy?

The Italians who left Italy and came to America had many problems. After a while, they were happy in their new country. The Italians joined many other groups of people who had come to live in the United States. Their families are very proud to be Italian-Americans.

ITALIAN-AMERICANS

Many Italian-Americans have contributed to our American society. This is a list of famous politicians, composers, entertainers and sports figures.

EXERCISE: See if you know in which areas each of these people are famous.

- | | |
|-----------------------|---------------------------|
| 1. Henry Mancini | 7. Carmen Lombardo |
| 2. Ella Grasso | 8. Joe Garagiola |
| 3. Mario Andretti | 9. Anna Maria Alberghetti |
| 4. Gian-Carlo Menotti | 10. Joe DiMaggio |
| 5. Mario Lanza | 11. Al Pacino |
| 6. John Volpe | 12. Filippo Mazzei |

Choose one of the above famous Italian-Americans and find out more about him or her. Write a report about the person, including some information about his/her contributions to our American society.

Read your report to the class.

MOSAICS

Mosaics have been used throughout history on the floors of buildings and ceilings of churches and important buildings. Mosaic tile floors were found in the ruins of Pompei, 79 A.D., over 1,900 years ago!

Mosaics can be used as decorative pieces or on floors, walls or ceilings. Patterns and pictures can be made with tile pieces. Tiles can be smaller than half an inch square to as large as twelve inches square. They can be made of glass, colored stones or ceramic tile.

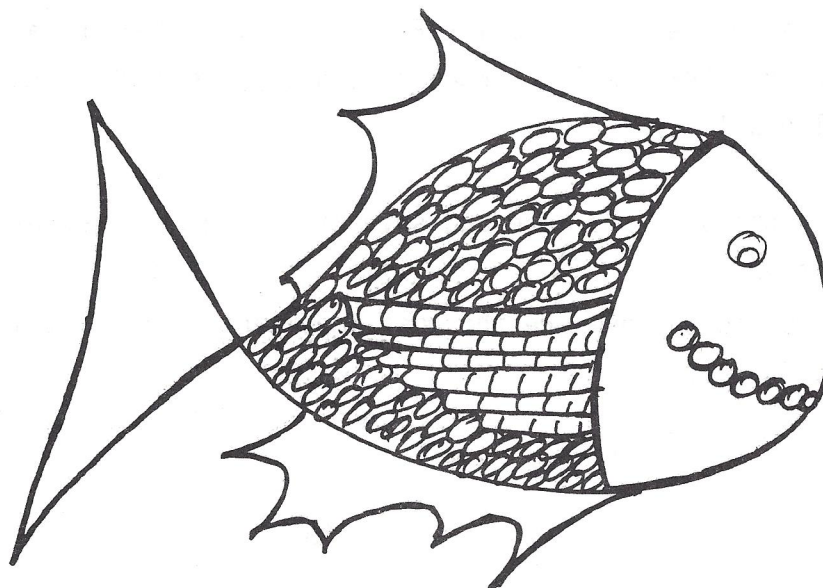
Mosaics are a beautiful way to create a lasting piece of art work.

You can make a mosaic picture using beans, corn kernels, peppercorns, macaroni and other dried foods.

You will need a piece of wood or cardboard and white glue.

EXERCISE:

1. Draw a design on the wood or cardboard with a pencil. Make your design simple.
2. Apply glue to a small area at a time.
3. Put beans (or corn, macaroni, etc.) on one at a time.
4. When the wood or board is completely covered and dry, paint over the entire picture with shellac or a mixture of half water and half white glue.



NATIONAL MARITIME MUSEUM - HYDE STREET PIER

Golden Gate National Recreation Area

Where are we going?

To begin with, the place you'll be visiting, exploring and getting to know is a NATIONAL PARK.

When you hear NATIONAL PARK, what kinds of things do you think of?

Make a list and compare it with a friend. Then compare it with the rest of your class.

What kinds of things do you expect when you visit a NATIONAL PARK?

Have you ever visited a NATIONAL PARK before? Which one(s)?

The place you'll visit is part of a very large NATIONAL PARK called the GOLDEN GATE NATIONAL RECREATION AREA (GGNRA).

The small part of GGNRA we will explore is located at Fisherman's Wharf at the end of the Powell-Hyde Cable Car line. It's called (get ready for another long name) the NATIONAL MARITIME MUSEUM AT SAN FRANCISCO, HYDE STREET PIER.

See if you can find it on a map of San Francisco.

Why do you suppose the PARK RANGERS who work there call it THE HISTORIC SHIPS?

When you come to the HYDE STREET PIER, you will be meeting and exploring the place with a PARK RANGER. What do you suppose a PARK RANGER in San Francisco looks like?

Draw a picture. Be sure and save it so you can look at it after your trip!

What do you suppose are the most important parts of this PARK RANGER'S job?

PRE-VISIT

NATIONAL MARITIME MUSEUM
HYDE STREET PIER

The place you'll see is a MARITIME MUSEUM. What does the word MARITIME mean?

What makes it different from other museums?

What makes it the same?

What kinds of TREASURES do you suppose you'll discover there?

One of the treasures you probably won't see are the people who built and worked aboard the ships. They were called: sailors, captains, mates, builders, riggers, shipwrights, etc.

List some ways that we can find out about them.

All of the ships in the collection were built at the "TURN OF THE CENTURY."
What does that mean? About how old are they?

List some words that tell how you would treat someone or something that old?



These ships were used for many different reasons.

List some things we use ships for now.

How about 100 years ago?

Which things appear on only one list? On both lists?

Sailors had a language all their own. When you board the ships at Hyde Street you'll need to know your way around. Here are some words that will help you find your way.

BOW - the front (or pointy) end of a ship

STERN - the back end, where the HELM, or steering wheel, is

FORWARD - towards the bow

AFT - towards the stern

(Remember that bow and stern are names for places and forward and aft are directions.)

PORT - the left side of a ship as you face the bow

STARBOARD - the right side of the ship as you face the bow

BELOW - down or below decks

ALOFT - above the decks, in the rigging

Now that you know your way, here are some important places and things aboard the C.A. THAYER:

FO'C'SLE - BELOW decks, forward. The place where the sailors slept.

AFT CABIN - near the STERN. Where the captain slept.

GALLEY - near the BOW. Landlubbers would call it a kitchen.

HOLD - BELOW decks where CARGO (lumber, salmon, codfish in the C.A. THAYER'S case.

FOREMAST - the big stick (MAST) nearest the BOW

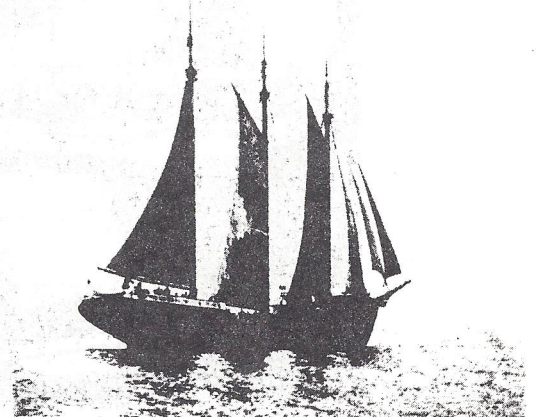
MAINMAST - the MAST in the center

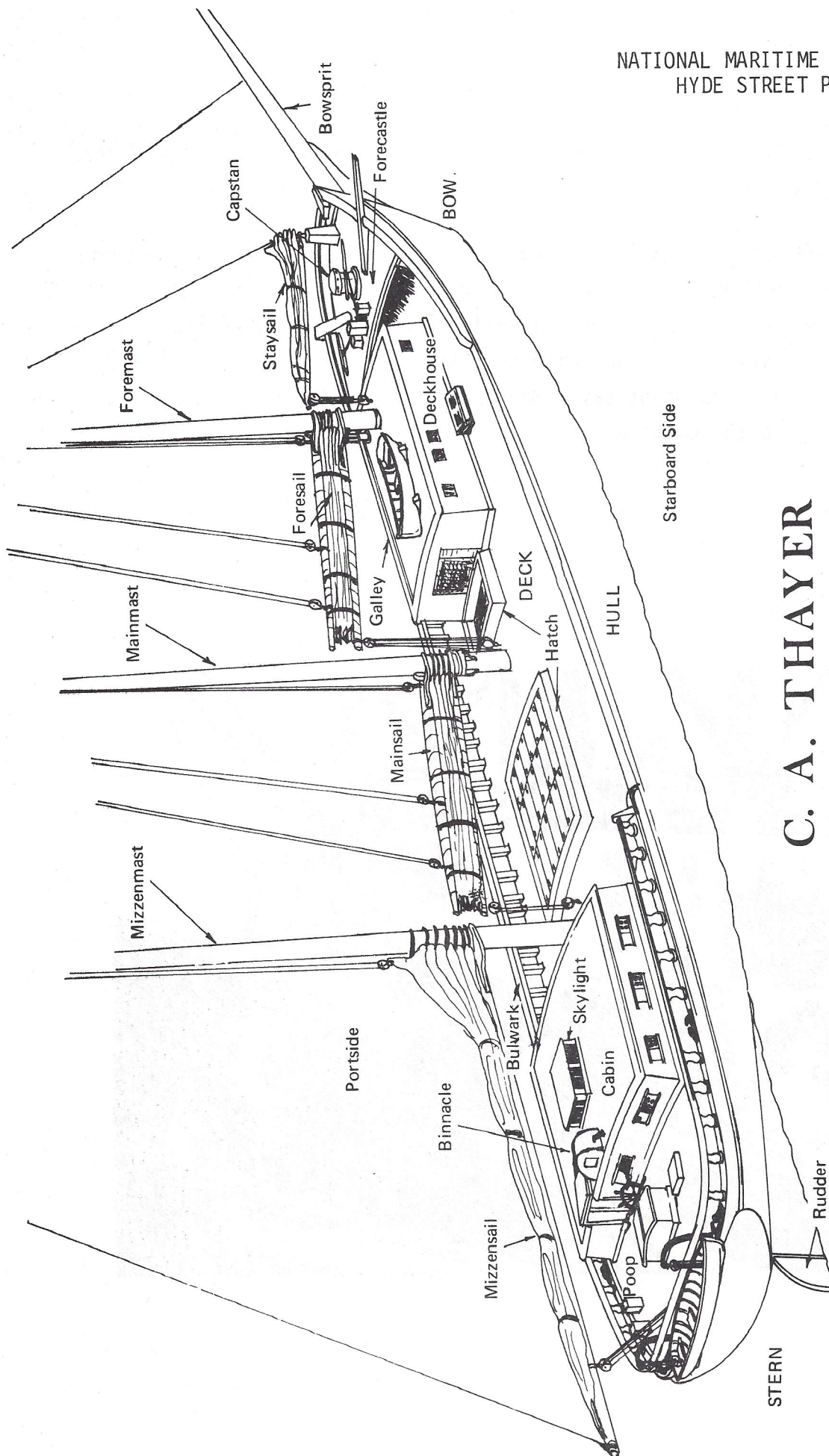
MIZZENMAST - the MAST nearest the stern

DECK - landlubbers would call it the floor

HEAD - the sailors' word for restroom

COMPANIONWAY - a doorway on a ship





C. A. THAYER

PRE-VISIT

NATIONAL MARITIME MUSEUM HYDE STREET PIER

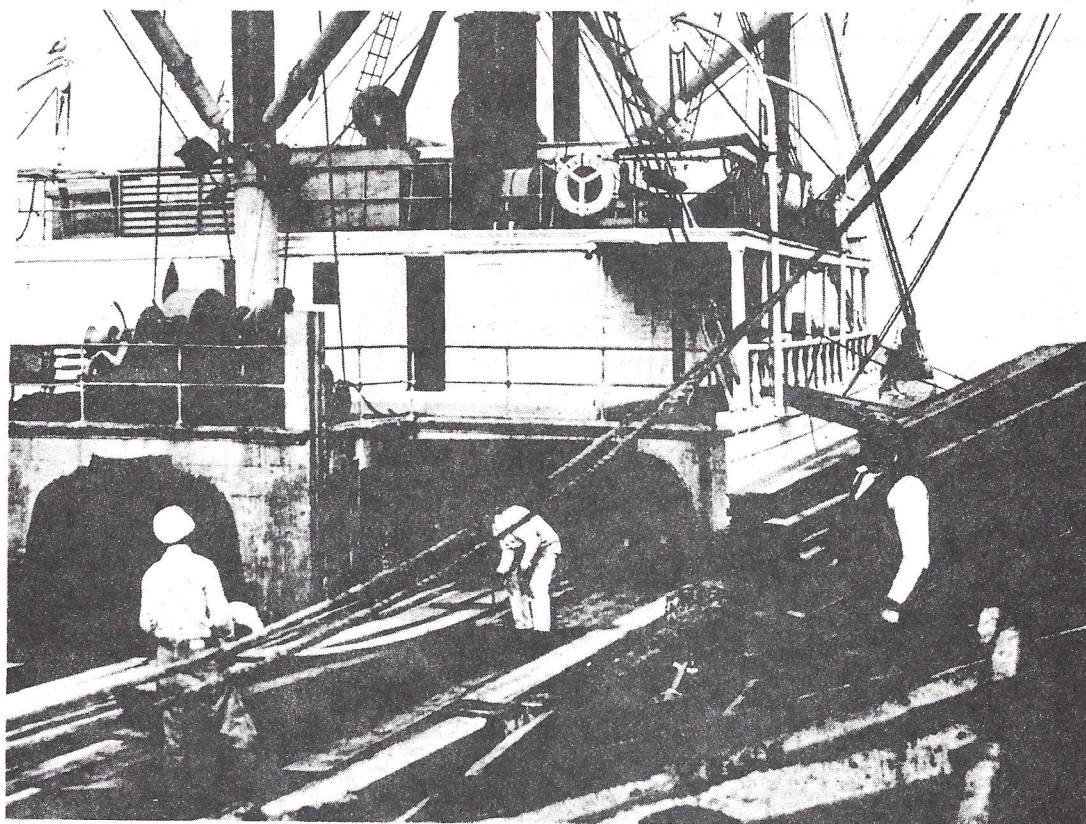
Words like this are much easier to understand and remember if you use them.

Imagine that your classroom is a ship!

Label the various places and directions and use them when you talk with your friends and with your teacher.

For example: You might say; "May I use the HEAD?" instead of "May I go to the bathroom?"

List some other things a sailor might say in your classroom.



POST-VISIT

NATIONAL MARITIME MUSEUM HYDE STREET PIER

EXERCISE:

1. List some of the TREASURES you saw at the HYDE STREET PIER.
2. Circle the ones you might see at another museum.
3. Pick one and write a story about how it came to be a part of HYDE STREET PIER'S collection. Write the story as if you are the treasure.
4. Share your story with a friend or with the whole class.

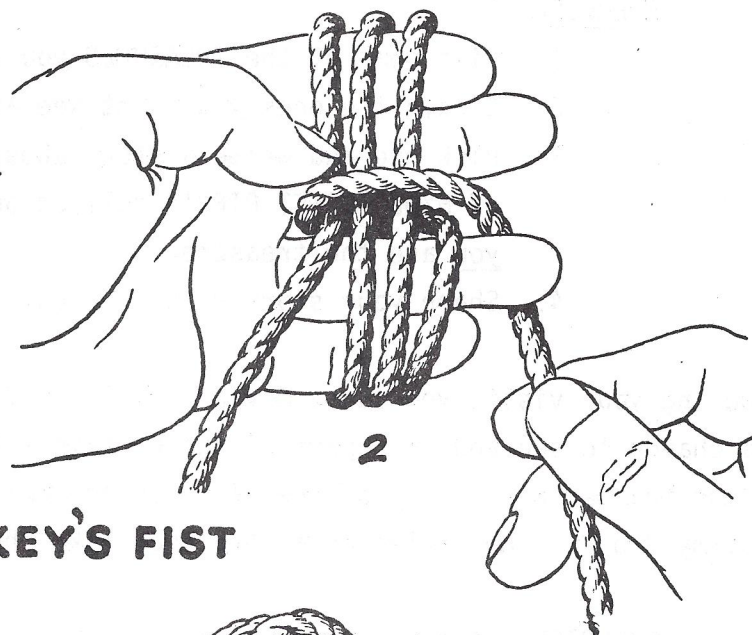
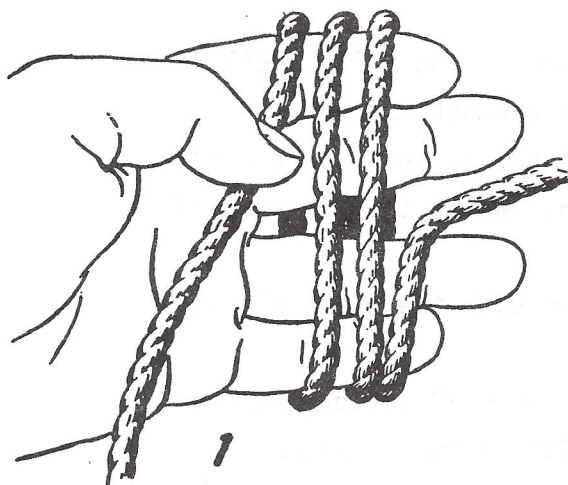
During your visit, you saw a movie of C.A. THAYER'S 1950 voyage and got a chance to see and hear part of the Captain's log of that voyage. Your teacher has a copy of the diary or journal of a codfisherman named Jimmy Crooks. He sailed on a ship much like the THAYER.

EXERCISE: After listening to the log and journal, imagine what it would be like to be a sailor on the C.A. THAYER for a week. Make a log or journal of your experiences.

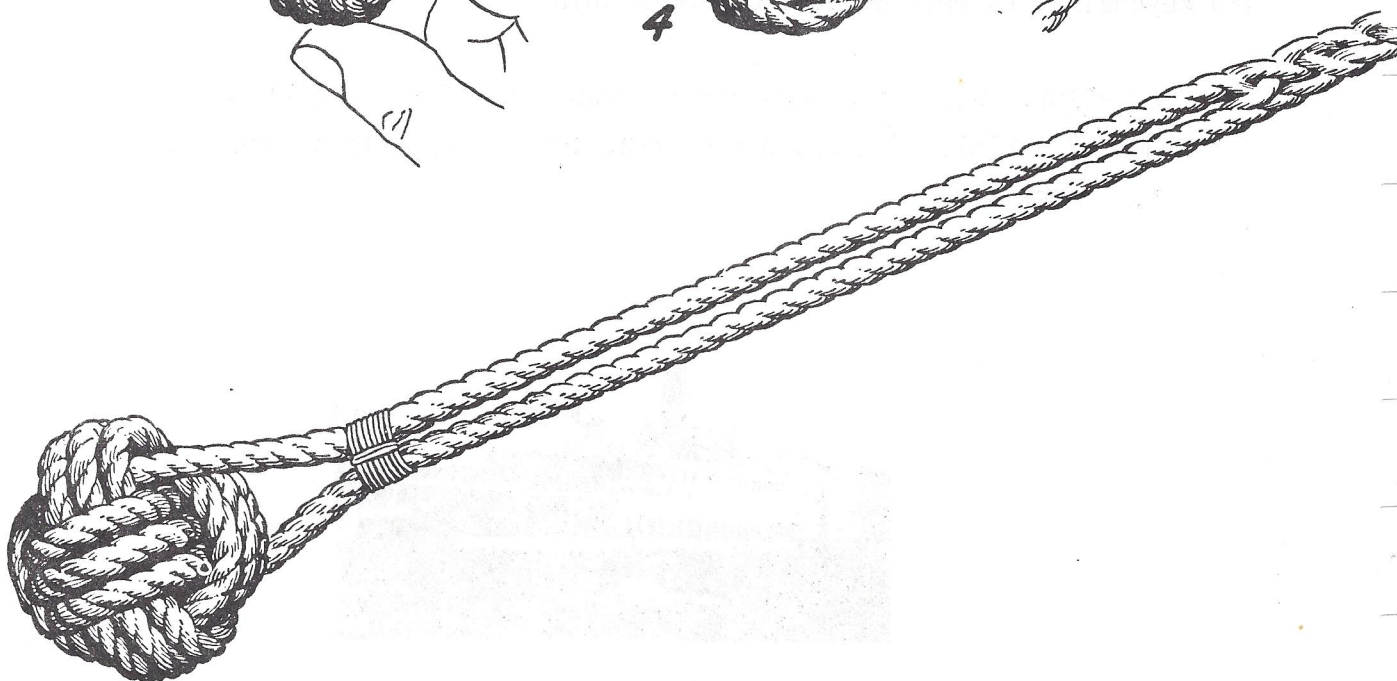
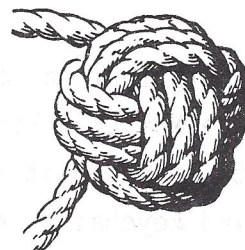
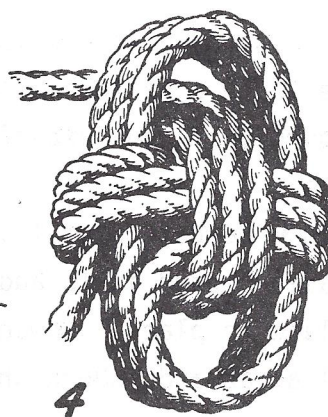
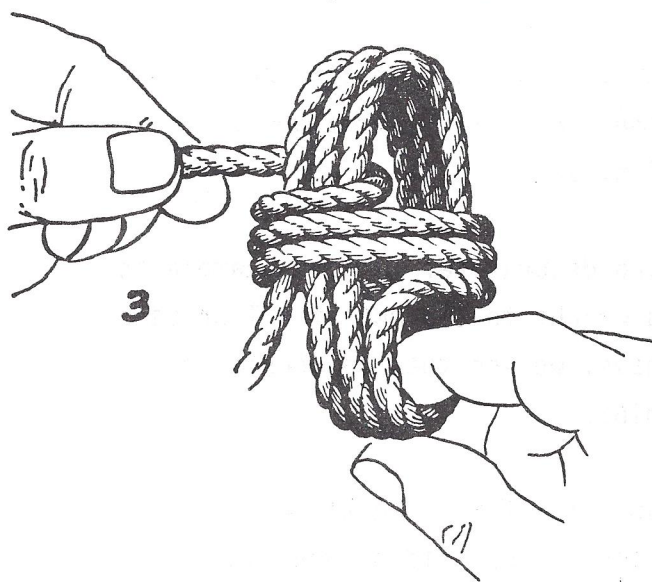
Knots that sailors used were both useful and decorative. A good example is the MONKEY'S FIST. Sailors used it to add weight to the end of a line as they heaved it from place to place. Nowadays, we see them on necklaces and keychains, as well as aboard modern ships.

EXERCISE: Using the attached diagram, see if you can tie a MONKEY'S FIST. You could use it as the sailors did or wear it as a necklace.





The MONKEY'S FIST



OAKLAND MUSEUM

The Oakland Museum is an exciting and unusual place to visit. The first unusual thing you notice is that the Museum looks like an ancient temple that has been overgrown by a jungle. There is a large garden hidden inside, where you will discover sculptures of many different colors and shapes.

The art, history, and natural sciences of California are waiting to be explored in the three major galleries. The exhibits are especially exciting because they surround you on all sides once you enter the galleries.

The Indian Life Tour takes you on a one and a half hour excursion through all three galleries and ends with a chance for you to grind acorns and play Native American games in our Museum on Wheels. On your tour, you will discover many things about how people lived in California before Europeans arrived just 200 years ago. You can also learn a lot about yourself by learning more about the first Californians.

The museum is located at 1000 Oak Street, Oakland, California, 94607. It is open Tuesday-Saturday from 10-5 and Sunday from 12-7. Admission is free. Tour reservations can be made by calling the Docent Office - 273-3514.



This is a view of how an Indian Village on San Francisco Bay may have looked 200 years ago.

WORDS TO HELP YOU

archeological - Archeology is the study of the past. Something archeological, like an archeological site, is something that is being studied to learn about how people lived in the past.

artifact - any object which was made and used by humans, such as a tool, a toy, or an item of clothing is an artifact.

chert - Chert is a very hard rock that can be made sharp by chipping it with stone or bone tools. Arrowheads are usually made of chert.

collage - A collage is a kind of art made by pasting many pieces of paper together onto a board.

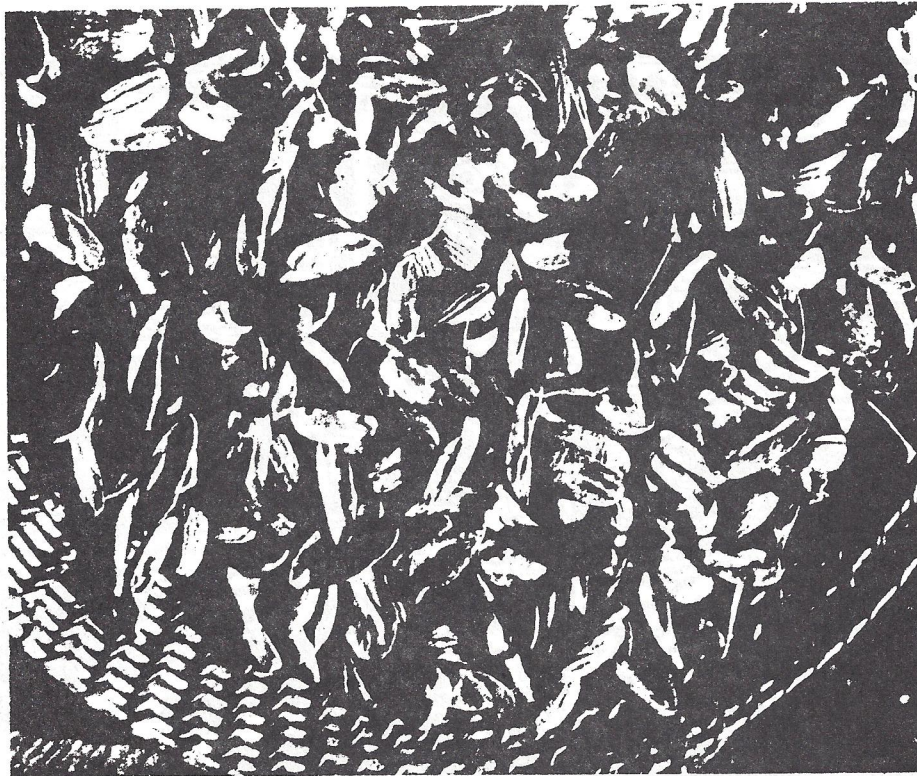
environment - Everything around you is your environment. Your natural environment includes plants, animals, soil, weather, and the air you breathe.

gallery - An area in a museum which has exhibits is a gallery. You will visit three galleries at the Oakland Museum.

heritage - Important things from our past, and from history, make up our heritage. It is important for everyone to remember their heritage. Once it is gone, it can never be recovered.

Native Americans - Native Americans are Indians who were living in America long before Europeans arrived here.

sculpture - A 3-dimensional artwork which you can walk around completely.



Shelled acorns ready for grinding © 1977

OUR INDIAN HERITAGE - A CALIFORNIA TREASURE

Indians who have lived on this land and who continue to live here are an important part of California's history and heritage. When Europeans came to this land--first a trickle of Spaniards and later a flood of gold miners--Indians were terribly mistreated. Some were enslaved. Many were killed. Others caught diseases brought by the newcomers and sickened and died. California Indians were forced off their lands, and the natural resources they relied upon were destroyed. By the end of the 19th century very few Indians remained and few people thought their story was worth remembering.

But their special way of living with nature has not been forgotten. Recent interest in these Native Americans has resulted in much study of their cultures. Archeological sites have revealed a great deal. Living Indians have shared memories of their youth and tribal histories. We now know and understand much more about their vanishing way of life. Today, when so many people are living on our planet and destroying natural environments, it is important for all of us to be aware of a time when people were able to exist more in harmony with nature and with one another.

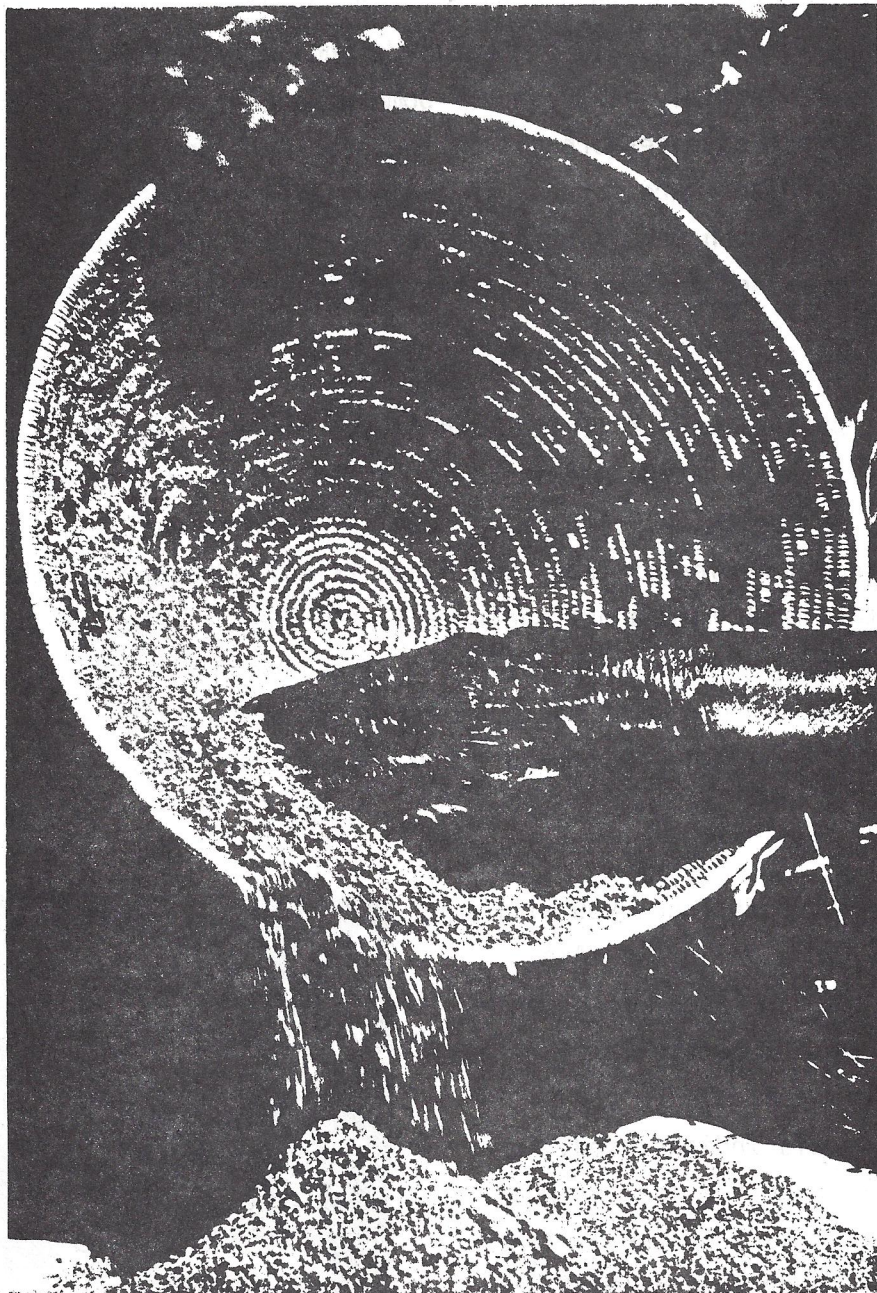
+ + + + + + + +

On the Indian Life Tour, you will walk through all three galleries--Art, History, and Natural Sciences--to experience different views of native Californians. In the Natural Sciences gallery you will see plants and animals Indians used, so that you will have a better idea of what their world looked like. In the History gallery, you will study Indian artifacts. And in the Art gallery, you will observe the ways in which 19th century European and American painters saw Indian life and environments. You will also be able to grind acorns and play Native American games in the Museum on Wheels. The Indian Life Tour provides four ways to understand a single subject - Native Americans of California.



Native Californian Indian weaving a basket.

© 1978



© 1977

"YOU HAVE NOTICED THAT EVERYTHING AN INDIAN DOES IS IN A CIRCLE, and that is because the Power of the World works in circles, and everything tries to be round. The Sky is round and I have heard that the earth is round like a ball and so are all the stars. Even seasons form a great circle in their changing, and always come back again to where they were. Our houses were round like the nests of birds and these were always set in a circle, a nest of many nests where the Great Spirit meant for us to hatch our children."

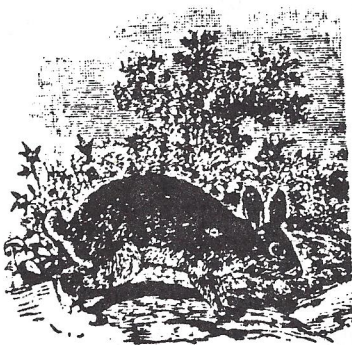
1. YOU ARE WHAT YOU EAT

a) Native Americans (Indians) ate many parts of plants that grew naturally in California. Some people think their diet was strange because of this. But if you think about it, you eat many roots, berries, leaves and fruits too.

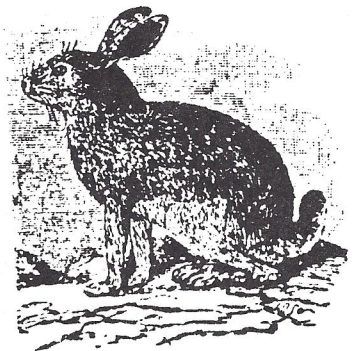
Divide up into groups of 4-5 students and make a list of all the plant parts you and the people in your family eat. Write the names of these plants on a chart like the one below. Here are some clues to get you started.

ROOTS	BERRIES	LEAVES	FRUIT
<i>Peanuts</i>		<i>Lettuce</i>	

b) Animals were also an important part of the diet of Native Americans. Which of these animals do you think Native Americans living in the Bay Area might have eaten?



ANIMALS	YES	NO
Duck		
Deer		
Oysters		
Sharks		
Rabbits		
Fish		
Bears		
Skunks		



Explain how you decided which animals they ate and which ones they did not eat. Do your classmates agree with your choices?

Make a list of the animals you eat and draw a picture of your 3 favorites. Are any of them the same as or similar to ones the Native Americans ate?

2. SIGN LANGUAGE

OAKLAND MUSEUM

Did you know that Indians in California spoke many different languages? Often, people living in villages several miles apart could not understand one another. When early Spanish and American settlers came to California, they often were unable to communicate through speech with Indians living here.

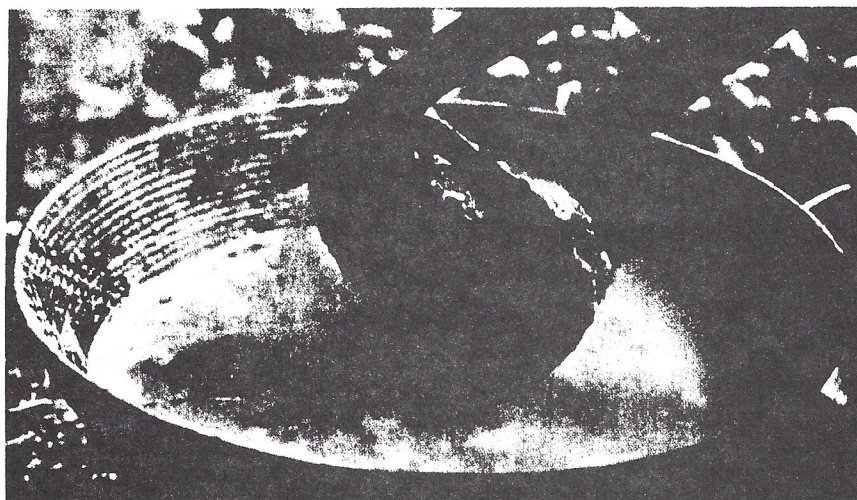
Select from your class a group of settlers and a group of Indians to role play. Imagine that you want to trade with one another--food for supplies, or you want to tell something but you can't talk because you don't know each other's language. You must use only sign language and actions! See if you can get your message across to the other group in this way. Good luck!

3. THE EXPLORER-ARTIST

The first artists who came to California were those who came with the explorers. These artists recorded what they saw - the people and the land - so friends and families back home could see what California was like.

Imagine you are both an artist and explorer, which you will be when you come to the museum. What would you take on your journey to California? On a sheet of paper, draw the objects you will bring with you on your exploration. Include artist materials, clothing, tools, etc. REMEMBER YOU CAN ONLY BRING WHAT YOU AND YOUR HORSE CAN CARRY.

Since you may want to trade with the Indians, draw one more object you would like to trade with them. Choose an object that tells something about the way you live and your culture.



Indians cooking acorn meal with hot rocks. © 1977

4. THE MUSEUM OF INDIAN LIFE AND YOU

Part 1

Bring in an artifact (object) from home that shows what our culture is like in the Bay Area today. Include clothing, records, foods, games, and sports that show how you live today (your culture).

Take turns showing your artifacts to the class and explaining what it tells about your life today. If talking to the whole class is too hard, you can (a) share in smaller groups or (b) display your artifact on a shelf or wall with a label explaining how it typifies your culture today.

Part 2

After your trip to the Oakland Museum, you will make drawings of Native American artifacts for the "Museum of Indian Life and You". While you are on the Indian Life Tour, watch for artifacts that are like objects you are bringing in now.



Ohlone with tule boat and paddle © 1978

1. NATIVE AMERICAN MUSEUM

Make a Native American (Indian) Museum right in your own classroom. Gather artifacts that show something about how the Native Americans lived. Remember that you might find some things in nature, just like the Indians! At the museum you learned that Indians used acorns, sea shells, cherts and other kinds of stone, grasses, bone and animal skins. What other things can you think of to bring? Make drawings of those objects you are unable to find.

2. THE CHANGING ENVIRONMENT

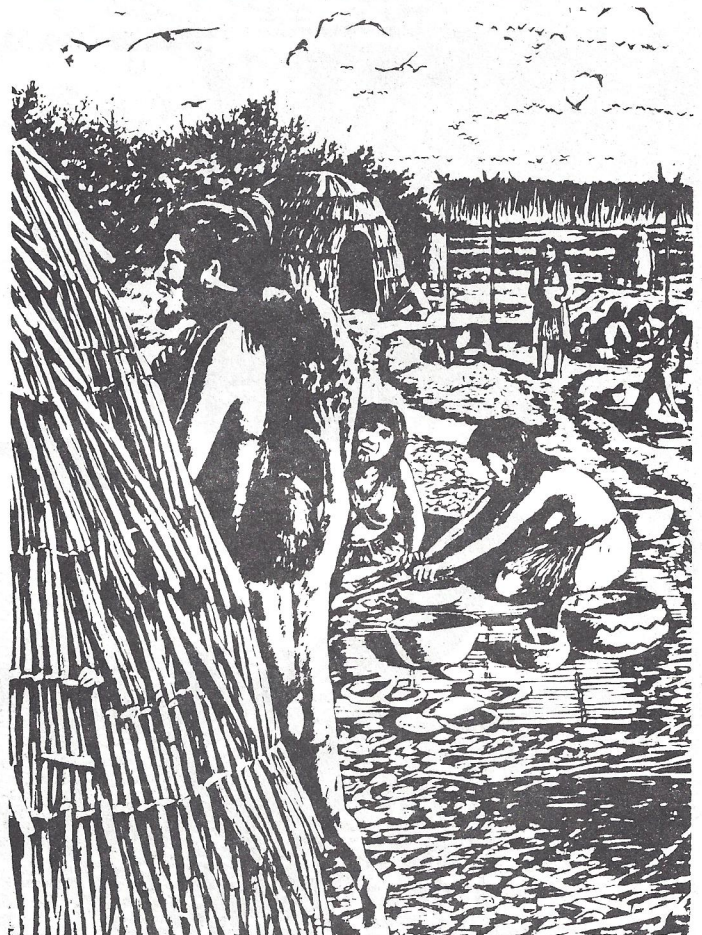
The Native Americans (Indians) loved and respected their land very much. Today, we can learn from the Indians how to take care of the land. Draw a scene of our own environment - the land - which shows how we care for it. Write or draw two (2) ways we could care for the land better. For ideas, remember the landscape paintings you saw at the museum and read the Native American quotations below:

"When we Indians kill meat, we eat it all up. When we dig roots we make little holes. When we built houses, we make little holes. When we burn grass for grasshoppers, we don't ruin things. We shake down acorns and pinenuts. We don't chop down the trees. We only use dead wood. But the white people plow up the ground, pull down the trees, kill everything."

---A Wintu Holy Woman

"THE TIPI IS MUCH BETTER TO LIVE IN; ALWAYS CLEAN, WARM in winter, cool in summer; easy to move. The white man builds big house, cost much money, like big cage, shut out sun, can never move; always sick. Indians and animals know better how to live than white man; nobody can be in good health if he does not have all the time fresh air, sunshine and good water."

---Chief Flying Hawk

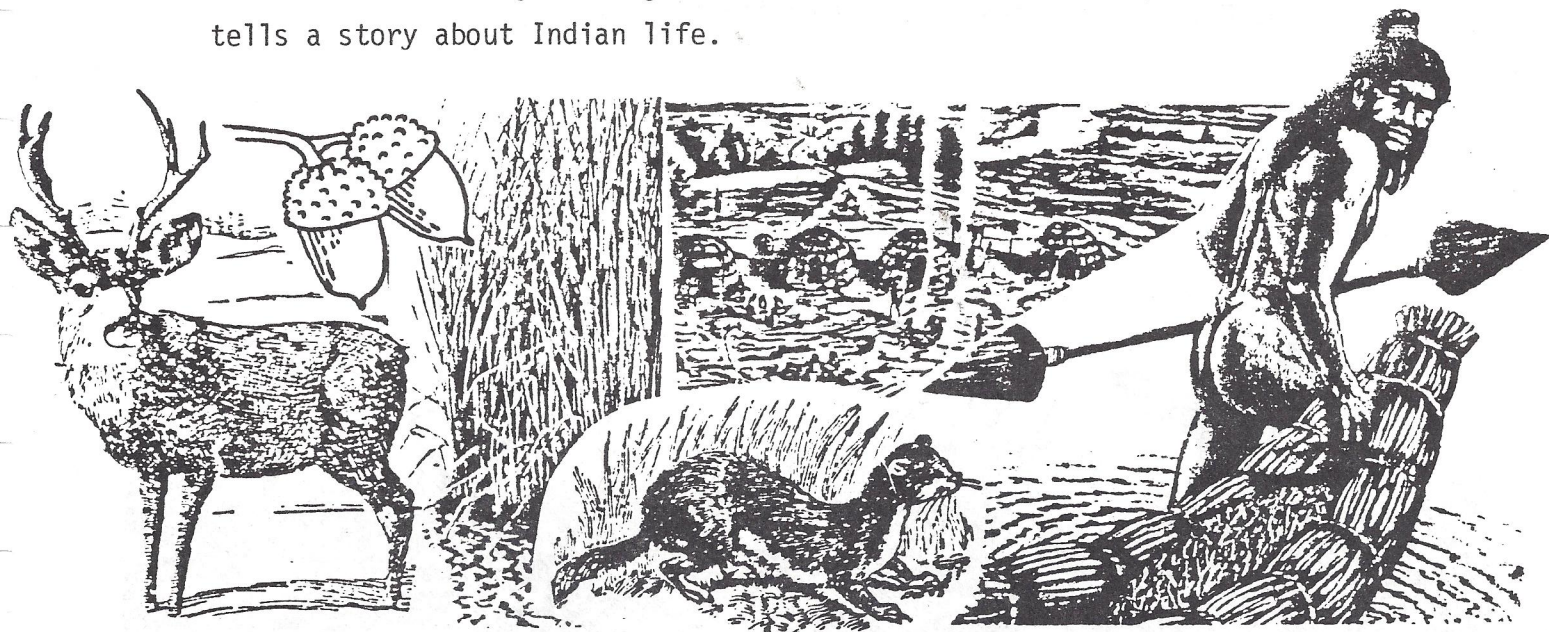


Ohlone Village Life © 1978

3. STORYLINE MURAL

OAKLAND MUSEUM

Imagine you are an artist on an expedition to California. Draw a scene, write a poem, or bring in an object which tells about Indian life: how the Indians lived, the plants and animals they relied on. With the rest of the students in your class, arrange these scenes and objects together to make a mural or collage which tells a story about Indian life.



© 1978

4. THE MUSEUM OF INDIAN LIFE AND YOU

Part 1

If you have already created a "Museum of Indian Life and You" before the trip, go on to the next paragraph. If you haven't, bring in an object (artifact) from home that shows how you live today (your culture). Include clothing, records, foods, games, sports, things you want to share about your culture.



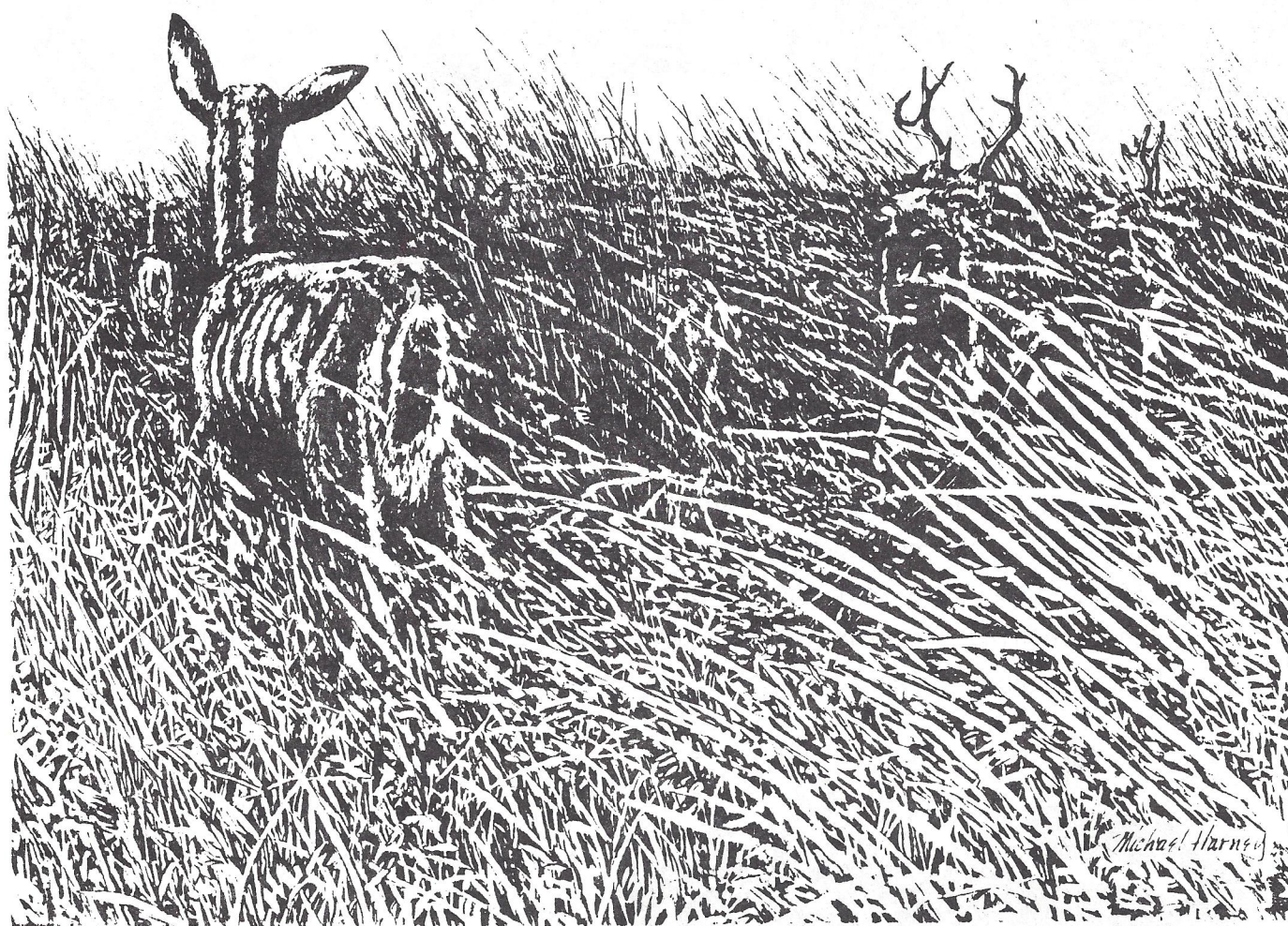
© 1978

Part 2

ADD THE NATIVE AMERICAN SECTION

Now, remembering what you saw at the museum, make drawings of the Native American objects that are like the modern objects you brought in for the museum. (For example, what kind of clothing did the

Native Americans wear?) Display your drawings behind the modern artifacts. Make labels that explain the similarities and differences between our modern artifacts and culture and the artifacts and culture of the Native Americans of early California.



Ohlone deer hunters © 1978

If you enjoyed your visit to the Oakland Museum, come back and visit again with your class or family. If you want to find out more about the Native Americans of California, read books on the Bibliography list.

INDIAN QUOTATIONS:

T. C. McLuhan, ed. Touch the Earth, A Self-Portrait of Indian Existence,
Elsevier- Dutton Publishing Co. N.Y.

TOUCH THE EARTH, A SELF PORTRAIT OF INDIAN EXISTENCE
Copyright (c) 1971 by T.C. McLuhan
Reproduced by permission of Elsevier-Dutton

GRAPHICS:

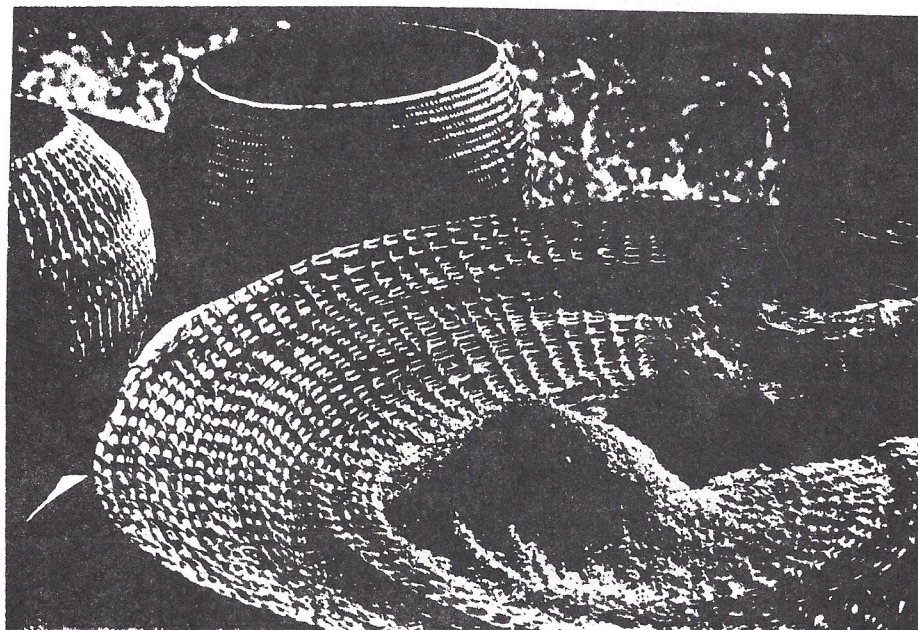
Malcolm Margolin. The Ohlone Way, Illustrations by Michael Harney,
Heyday Books, Berkeley, 1978

From THE OHLONE WAY
Copyright (c) 1978 by Malcolm Margolin
Reproduced by permission of Heyday Press

Richard Simpson. Ooti, A Maidu Legacy, Celestial Arts. Millbrae, CA 1977

From OOTI, A MAIDU LEGACY
Copyrighted (c) 1977 by Richard Simpson
Reproduced by permission of Celestial Arts

Oakland Museum - Natural Sciences Department



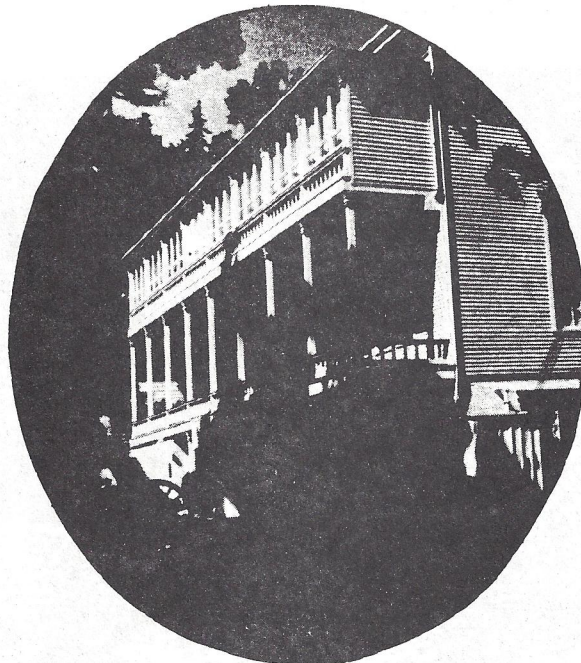
Ground acorns in a basket © 1977

PRESIDIO ARMY MUSEUM

The Presidio Army Museum is located in an 1863 Army hospital. It is the only history museum that covers the story of San Francisco from the Spanish Period (1776) through World War II.

The museum has interesting exhibits in the following areas:

1. Spanish San Francisco; 1776-1846.
2. The Gold Rush and how the army defended San Francisco by building forts on the San Francisco Bay. For example: Fort Point and Alcatraz.
3. The Indian Wars - especially the Modoc Indian War of 1870-71.
4. A Victorian Wedding reception and ball, complete with historic furnishings.
5. The Spanish American War; 1898-1901.
6. The Great Earthquake and Fire of 1906.
7. The 1915 Panama Pacific International Exposition.
8. World Wars I and II.



GO FOR BROKE!

For the California Treasures program, you will be concentrating on an exhibit opening in 1981, about the Japanese-American soldiers during World War II.

Before you begin, learn the meanings of the following words by

- 1) looking each word up in the dictionary
- 2) using each word in made-up sentences until you feel comfortable with it.

ancestor (ancestry)

combat

immigrate

battalion

evacuate

infantry

citizen

generation

motto

A little over 100 years ago, about 1870, Japanese people started immigrating to the United States.

Because they were born in Japan, they were the FIRST GENERATION to live in this country. That's how they got the name ISSEI, which means FIRST in Japanese.

EXERCISE: See if you can find out who, in your family, was the first person to come to the United States. Parents? Grandparents? Or maybe even YOU? From where did your family come?

Although the Isei weren't American citizens, their children, the NISEI (meaning SECOND) were. They often grew up speaking English better than Japanese.

These people came to believe very deeply in the American way of life and in the type of government we have here.



WORLD WAR II

On December 7, 1941, the country of Japan attacked Pearl Harbor- a place in Hawaii where all of our Navy's ships were being kept. Suddenly, the United States was involved in World War II, and Japan was our enemy!

EXERCISE: Before you read any further, think about the following question and discuss it with your class:

Since the United States was now at war with Japan, do you think the Issei & /or Nisei should be counted as Americans or Japanese? Why?

Write your answers first; then share your opinions with your class.

So- what about the Japanese-Americans? The Nisei were American citizens the Issei had been here for many years and thought of themselves as Americans.

For about 10 years before the bombing of Pearl Harbor, the government had been investigating the loyalty of the Japanese-Americans. There were no cases of disloyalty found then, or after the beginning of the war.



These Japanese-Americans were considered dangerous and suspicious by members of the War Department; while Americans of Italian and German ancestry were not- and we were at war with Italy and Germany also!

Finally, President Roosevelt himself was convinced that the Japanese on the West Coast were possible threats to the safety of our country. After much discussion, Roosevelt signed an order for the evacuation of ALL people of Japanese ancestry from the West Coast to Relocation Centers.

Relocation Centers were usually very crowded and pretty uncomfortable- especially compared to the homes that the people sent there had left behind.



EXERCISE: Imagine you are an immigrant from a far away country. (Pick one or find out where your ancestors are from.) You have lived here about 15 years.

Suddenly, the country where you were born attacks the United States. A few days later, an order comes from the president saying that you and your family must move to a Relocation Center- because you are a threat to the country's safety.

Write a letter to your congressman (or the president) explaining your feelings about this situation.

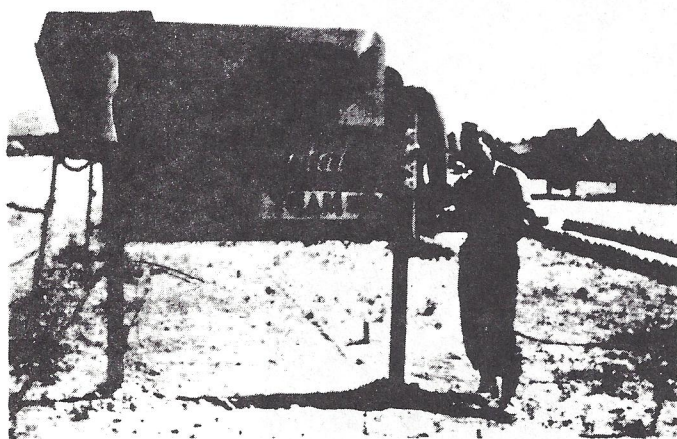
(You might write as if you were a man, woman or child. Use your imagination-- and your feelings, too!)

The Japanese Americans were not angry at the American people or the government for their evacuation and mistreatment during World War II. Instead, they accepted their situation as a challenge and looked for ways to show their loyalty to the United States.

During the first year of the war, the Japanese Americans had little chance to help. In January, 1943, the Secretary of War announced the formation of a special combat team of Japanese Americans- and he called for volunteers.

The War Department said they wanted it to be a totally Japanese-American team- to give the Nissei a chance to fight for their country and prove their loyalty, once and for all.

This led to the births of the most famous Japanese American units: The 100th Infantry Battalion and the 442nd Regimental Combat Team.

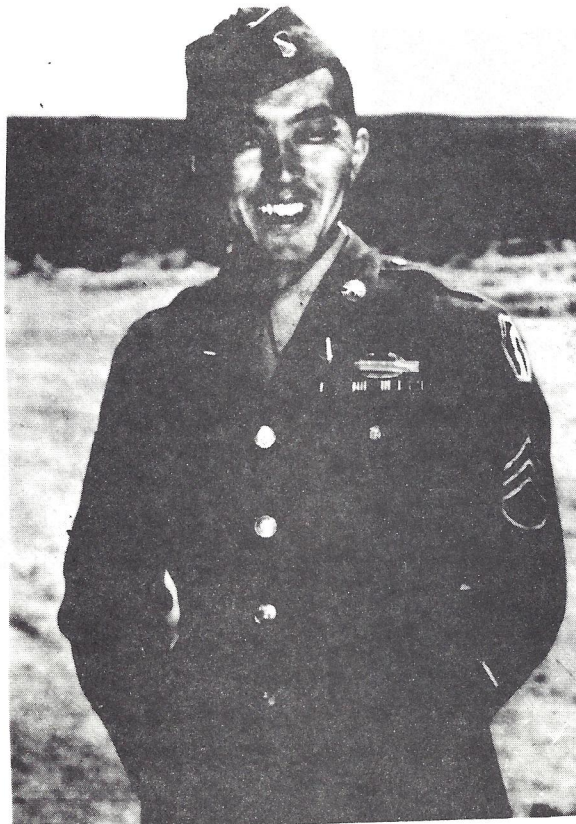


Many of the soldiers for the 442nd came from Relocation Centers.

EXERCISE: Imagine that you are a young man of 19 or 20 years old. You are in a Relocation Center with your parents and two younger sisters. One day, some government men come and ask if you want to volunteer to fight in the war, to help defend the United States against its enemies.

What would you say? What would you do? Why?

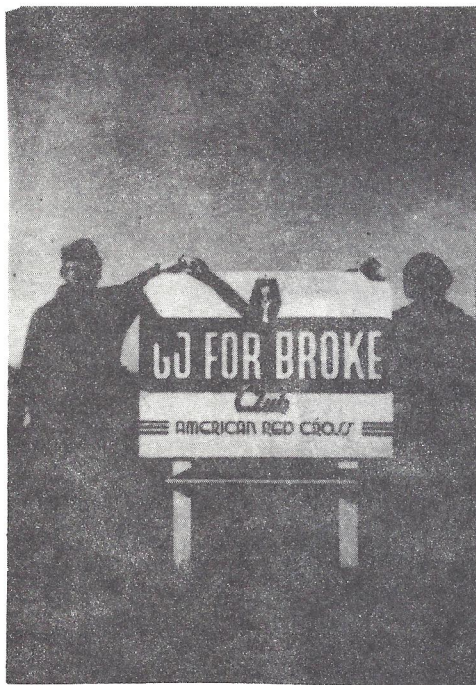
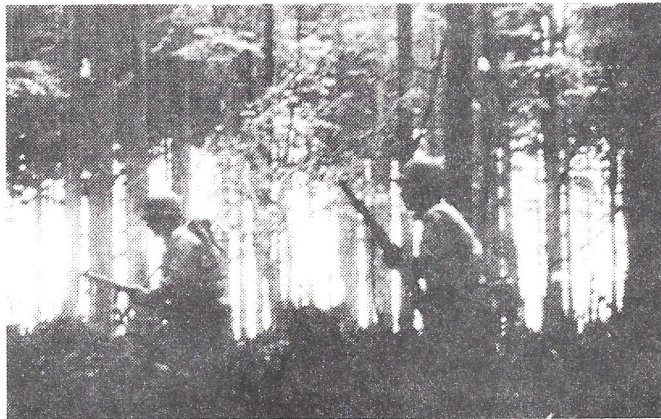
1. With a partner, pretend that one of you is a Nisei- as described above, and one of you is a representative of the United States government.
2. Now have a discussion - where the government man is trying to get the Nisei to volunteer.
3. When you have finished, and the Nisei has either agreed to fight or not; then switch roles and begin again.



POST-VISIT

PRESIDIO ARMY MUSEUM

The motto for the 442nd was "GO FOR BROKE". This meant they put their ALL into everything they tried to do. In all its fighting during the war, the 442nd never took a backward step. For its size and length and length of service, it received more medals than any other unit in the history of the United States Army.



SAN FRANCISCO EXAMINER

The SAN FRANCISCO EXAMINER started as a newspaper about 120 years ago. The EXAMINER tried very hard to do well. It began to after someone gave the paper to a senator named George Hearst to pay off a debt (the person owed Senator Hearst some money!).

About 100 years ago, the EXAMINER was turned over to William Randolph Hearst, one of the most famous editors who ever lived. (An EDITOR is the person who decides what goes in the paper).

Today, Randolph A. Hearst, son of William Randolph Hearst is president of the newspaper.

On the next few pages, you will learn about some of the things that make up a large daily newspaper.

PRE-VISIT

NEWSPAPER FAMILIARITY EXERCISES:

1. Look at your newspaper. What are some things you notice about it?
2. How many sections does it have? What are their names? What kinds of articles are in the different sections? Which is the biggest? Which is your favorite? Why? Are any of the sections printed on different color paper? Why? Which section has the comics?
3. Is most of the space in the newspaper advertisements (don't forget classified ads) or is most of it news? Where are most of the ads? Do any of the front pages of the different sections have ads? Why or why not?
4. Look at the front page. How is it different from all the other pages? What kinds of stories are on the front page? What kinds of stories don't belong on the front page? How are the stories in the front section different from the stories in other sections?
5. Why is such a big newspaper so inexpensive? Is it because so many people buy it or is there some other reason?
6. Draw a series of pictures showing how you think the newspaper is put together. Do it step by step — starting from the reporter getting a story and finishing with the paper being delivered to the newstand.

SCAVENGER HUNT

EXERCISE: Find the following items. The first person or group to finish is the winner.

The index

Four Wire Service designators (AP, UPI, REUTERS)

A travel ad

An ad for a used MG car

A supermarket coupon

The net change in General Motors stock that day

The local symphony coming event

A movie review

A story about something that happened in the Middle East

A political Cartoon

A shoe ad

An article about the cost of living

PRODUCTION EXERCISES

1. Study the PRODUCTION TERMS until you understand them and can use each one in a made-up sentence.
2. Study the Reporter to Reader Chart carefully. Explain the step-by-step procedure to study partner. Have him or her explain it to you.
3. Set up stations in your classroom; one for each step on the Reporter to Reader Chart. Have at least one person stay at each station. Take turns following a story from Step 1 through Step 14.
4. Which part of the process is the most interesting to you? Learn more about that part during the tour and/or in independent study. Tell your class in a report why you selected the step you did? Why is it important in the overall make-up of the newspaper?
5. Name three important things you learned in the above exercises.

PRODUCTION TERMS

COMPOSE — To set type.

DEADLINE — Time when a story must be completed or paper is to go to press.

DUMMY — A diagram or layout of a newspaper page showing the placement of the stories, headlines, pictures and advertisements. Further, it is like a map for the printer when composing the page.

EDITION — An issue of a newspaper.

FORMAT — The size, style and shape of a publication.

HALFTONE — A photograph that has been screened placing dots in the photo. Thus photos can be printed on newsprint giving the tonal values of the original.

JUMP — To continue a story from one page to another page.

KILL — To strike out copy or take out type not to be printed, such as eliminating all or part of a story, an ad or a page.

MAKE-UP — The arrangement of stories, headlines and pictures into columns and pages in preparation for printing.

PASTE UP — The page with all stories, headlines and pictures, pasted up in preparation to be photographed.

PICA — A unit of newspaper line measurement equal to 1/6 of an inch.

PLATE — A reverse image of the page burned into an aluminum sheet with plastic coating.

PRODUCTION — The department where the newspaper is composed and printed.

PROOF — Preliminary copy of news or an ad to be read for errors or revision.

PROOFREADER — One who reads the proof and marks the errors.

VELOX — Same as halftone. Screened photograph on film is a velox.

REPORTER & READER



FRONT PAGE TERMS

ART — A general term for all newspaper illustrations and photographs.

BANNER — A headline in large letters running across the entire width of the page.

BYLINE — The writer's name appearing at the top of a news story.

CAPTION — A title or explanation accompanying a picture.

COLUMN — Vertical row of type in the paper; the space for type.

COPY — All written material.

DATELINE — The line at the beginning of a story giving the location of the news item.

EARS — The space on the page on each side of the nameplate.

FLAG — The newspaper's name on the front page. (Also called NAMEPLATE)

HEADLINE — A title given to a newspaper story.

INDEX — List of contents including section and page numbers.

KICKER — A small headline with some "punch" placed above the main headline of a story.

MASTHEAD — Information stating the title, ownership, subscription rates, etc., printed in every issue of a newspaper.

FRONT PAGE

EXERCISE: Take a front page of a newspaper and find an example of each of the above terms. Label each part clearly.

EXERCISE: Make up your own front page including each of the parts you have just learned. Don't forget to leave space for art. It is not necessary to write copy, but do create some good headlines.

EXERCISE: Explain the function of the front page. Why is it held until the last minute? What are some of the regular features on the front page? See if you can find the same types of things on the front pages of different daily papers. (E.G. Masthead, Banner, Headline, Index, Weather, etc.)

EXERCISE: Look at the front page of your paper from exercise #1. What is the headline of the top story? What are the names of the most important people in the story? Is it a local happening, or of regional, statewide, national or international interest? Why? Where is the story placed on the page?

EXERCISE: What is the headline of the next most important story? Do you agree it is less important? Why or why not?

Newspaper editors usually try to print the most important news on the first page. The story with the largest headline is called the LEAD STORY. The News Editor must look at the stories from the local reporters, the wire services (AP and UPI) and other sources. He decides which story is the most important and deserves to be the lead story.

The News Editor also decides which other stories are to go on the front page. He must rely on his judgement. Below is a chance for you to practice using similar judgement.

EXERCISE: Read the headlines below and number them in the order of their importance. Write "1" next to the head you think is most important, "2" next to the second most important, and so on.

- COLD FRONT EXPECTED TO BRING RECORD LOWS
- NEW ZONING LAW WOULD BAN MOBILE HOME COURTS
- SMALL PLANE CASHES IN NEW YORK STATE, KILLS 7
- SENATE POSTPONES VOTE ON SURPLUS GAS TAX BILL
- LOCAL GIRL WINS STATE BEAUTY CONTEST
- FLORIDA FIRM PURCHASES LOCAL NEWSPAPER TODAY
- EARTHQUAKE IN SOUTH AMERICA KILLS 10, INJURES DOZENS
- HIJACKERS DETOUR MEXICAN AIRLINE FLIGHT TO CUBA
- FORD WINS DECISION IN PINTO ACCIDENT CASE
- ECONOMIST PREDICTS RISE IN PRIME INTEREST RATE TO 22%

- a) Explain your reasons for choosing the headline you marked #1.
- b) Explain your reasons for choosing the headline you marked #10.
- c) Which heads are of local interest only?
- d) How does geography play an important role in determining the impact a story will have on readers?
- e) When, if ever, can a weather story be the number one story?
- f) Which headlines above might also appear in a foreign newspaper? Why?
- g) Which stories would you expect to see continued over a few days? Why?
- h) Which headlines would affect you most personally? Why?

CLASSIFIED ADVERTISEMENTS

Classified advertisements are all grouped together in a back section of the newspaper. They are "people to people" ads; one person trying to reach someone who will buy his house, give him a job, find his dog, etc. They are usually telephoned into the paper. Cost is determined by the number of words in the ad and the number of days it will run in the paper.

These ads are called classified because they are grouped (or classified) under specific headings. Some of the classifications are: Announcements, Automobiles, Business Services, Financial, Help Wanted, Home Furnishings, Real Estate, Rentals, etc.

Most of these advertisements appear in very small print and require only a few lines.

There are a few points to consider when writing a classified ad:

1. The very first word should be carefully chosen.

Since there are no pictures to catch the reader's eye, the first word must arouse the reader's interest and convey information. Most people read ads quickly and pass over ads that do not immediately catch their attention.

EXERCISE: Find an ad with a poor beginning. Explain why it is unsatisfactory. Rewrite it so the first word is interesting and informative.

2. Use as few words as possible, but be sure to include all necessary information.

Ads are priced by length, so it is essential to print the message in as few words as possible. Your energy will be wasted however, if you exclude some vital information.

EXERCISE: Find an ad that is short but leaves many questions unanswered. Explain what information is lacking. Make up the missing data and rewrite the ad; keeping it short but including enough to make it effective.

3. Use only standard abbreviations.

Abbreviations will save you space and money, but they will only help to confuse the reader if they are uncommon or non-standard. He will thus be less likely to follow up on the ad.

EXERCISE: Look through your classified sections and find one ad that has abbreviations you feel are non-standard or unfamiliar. With the help of your study partner, see if you can figure out the abbreviations and rewrite the ad so it makes sense.

4. Place your ad in the appropriate classification.

If you want to sell a piano, for example, you should place your ad under such classifications as Musical Instruments or Articles for Sale. If you can afford it, you may even want to place your ad under more than one classification. The more places it appears, the more readers it will reach.

EXERCISE: Using what you have learned, write two ads. They should be from two different classifications (e.g. Home Furnishings, Automobile, For Rent, etc.)

a) Have your study partner check it to see that it follows the above guidelines. You check your partner's ad also.

b) Correct your ad as necessary.

EXERCISE: Look through your classified section and find one ad to fill each of the following needs. Copy the ad that sounds the most suitable.

1. Your mother wants to buy a used refrigerator for under \$150. It must be full-sized and frost-free.

2. You want to buy a German Shepherd puppy; female, all shots, papers.

3. You want to buy a 1967 or 68 Mercedes 280 SE with a sunroof. It must need no engine or body work. Price is not a major consideration.

4. You are looking for a one bedroom apartment in Berkeley. It must allow pets and be under \$300 per month.

5. You want to start taking piano lessons. You need a teacher who charges no more than \$15 per hour.

6. You want to sell parts from your own Volkswagen bug.

7. You have a litter of kittens to give away free to good homes.

8. You need someone to cut your lawn once a month.

9. You want to buy a used sewing machine with a zig-zag attachment.

10. You need a passenger to ride with you to the East Coast; driving and expenses shared.

SAN FRANCISCO MUSEUM OF MODERN ART

Have you ever thought that a giant picture of a Campbell's Soup can might be considered art? Or a picture of a famous star with yellow skin and green hair? Or a picture of a table (below) where the objects are falling off and it's hard even to tell what they are, anyway?

Up until about 100 years ago (or less!) most people didn't think anything so "crazy" could be called real art. What happened? As times change, people change. What does that mean? People used to have pretty strong opinions about what was properly called art.

It would have to be a portrait, a landscape, a still-life or a representation of a story from history or the Bible. It would also have to look exactly like what it was - no guess-work and little imagination to figure it out.

Then a few artists began to use their imaginations and creativities in new ways (as artists will be known to do!). Different styles of painting started to appear. These styles were different because it wasn't always so easy to tell what the subject of the painting or the sculpture was.

Have you ever seen a work of art that doesn't look like anyone or anything in particular?



Georges Braque

Le Guernon (Writing Table)

That is called ABSTRACT ART. The opposite is REALISTIC ART. That is where the subject of a painting or sculpture is very easily seen and understood.

EXERCISE: Look at the pictures on the next couple of pages and in other parts of the book. You see lots of abstract and realistic pictures.

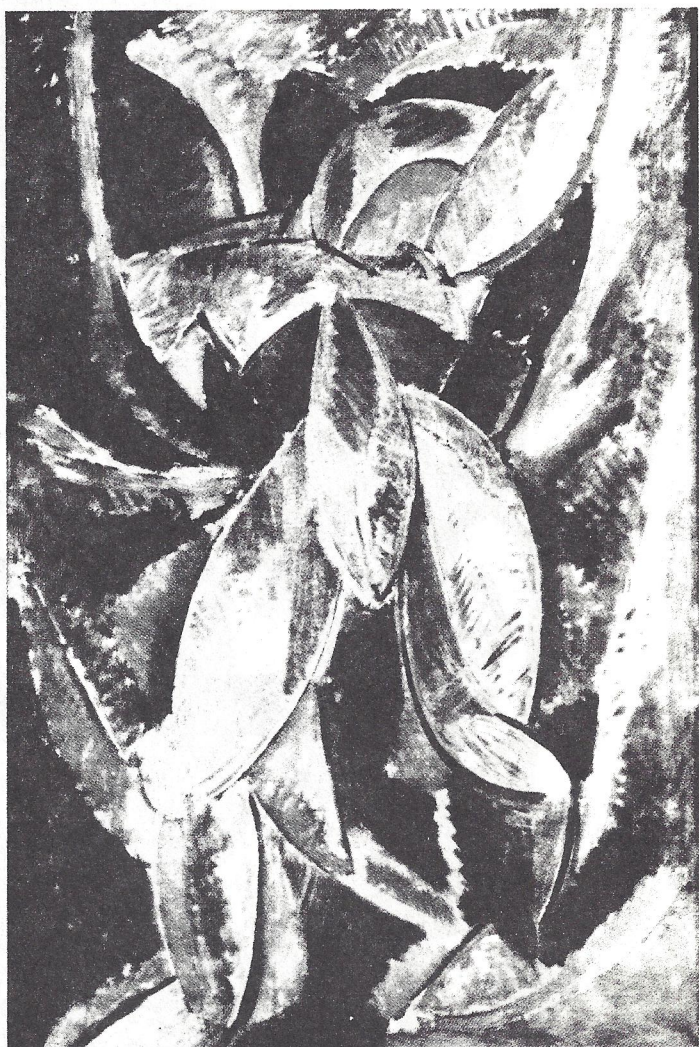
Which kind do you like better (if either). Why?



NATURE MORTE (STILL LIFE) Fernand Léger



A GIRL WITH A WATERING CAN
Auguste Renoir



STANDING FIGURE
Pablo Picasso

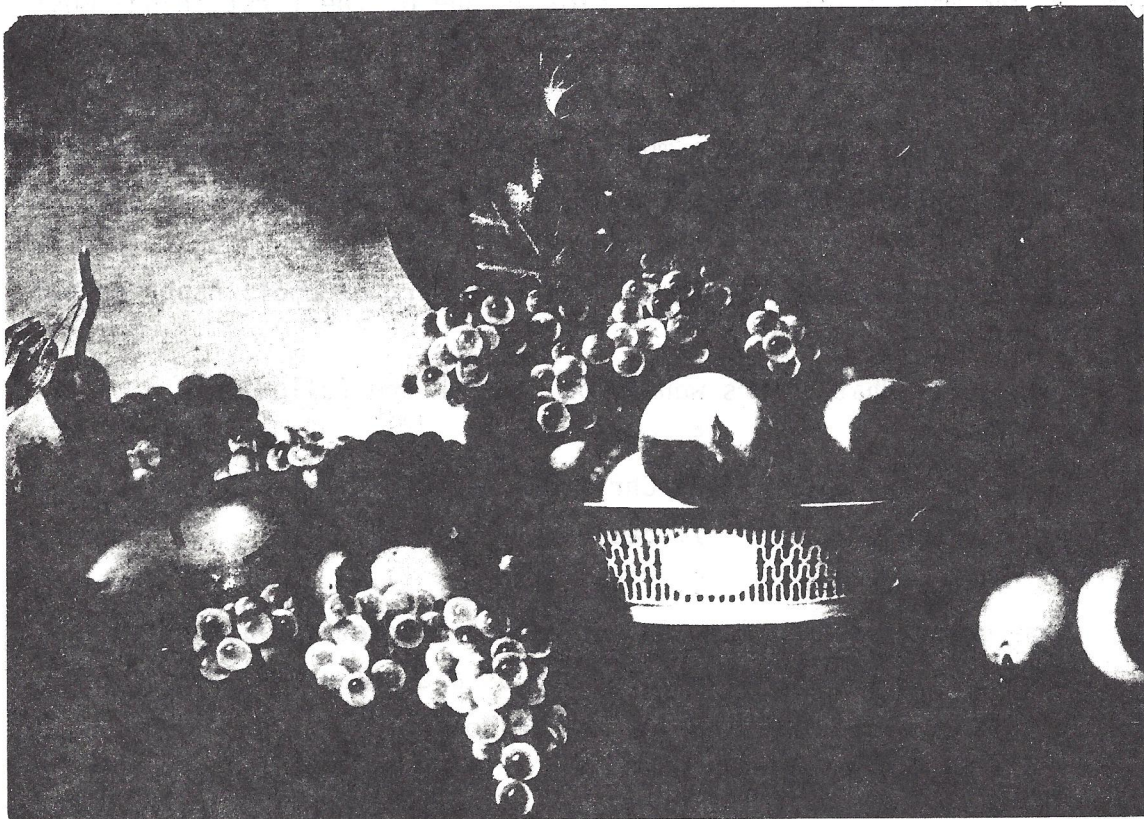
PRE-VISIT

S.F. MUSEUM OF MODERN ART



BORD DE MER
(SEASHORE)

Henri Matisse



STILL LIFE WITH FRUIT

James Peale

A STILL LIFE is a picture of flowers, plants and/or objects. The artist arranges these things and then draws them as he sees them or as he would like someone else to see them.

EXERCISE: Set up some objects for a STILL LIFE drawing.

1. Draw the still life as realistically as you can.
2. Now do an abstract drawing of the same objects.

The San Francisco Museum of Modern Art was officially opened in 1935. It is the second oldest museum of modern art in the world. It has been an important help in getting people to accept and understand new art forms. Most of the permanent collection is works created after 1900.

These works are treasures because they are by creative and imaginative artists - who were also brave enough to do something different.

One of the ways in which the "modern" art differs from the traditional art is the ways color is used. Color is one of the first things most of us notice when we look at a painting.

Color can be used to create a mood or feeling. Some colors remind us of warm things. Other colors remind us of cool things.

Artists sometimes use color to make us feel warm or cool, happy or sad.

EXERCISE: What colors would you use for the following?

- | | |
|---------------|----------------------|
| 1. sun | 5. water |
| 2. winter day | 6. Christmas picture |
| 3. forest | 7. desert |
| 4. autumn day | 8. fire |

Some colors seem to jump out at us and attract our attention.

Some colors seem to move away from us and relax us.

What colors are used for the following?

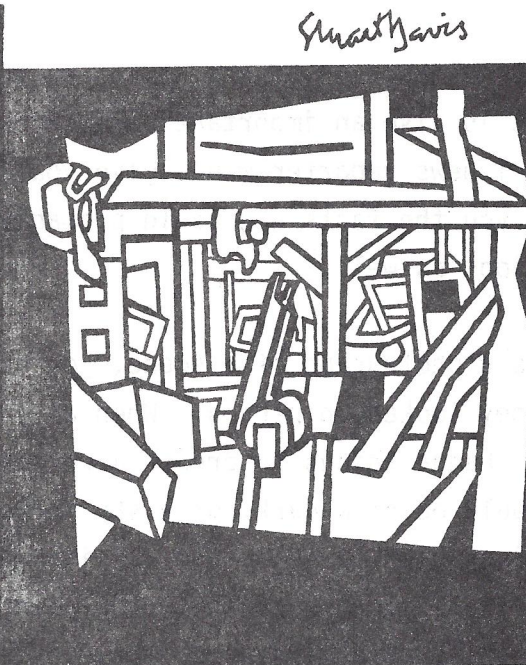
- | | |
|--------------------------|------------------------|
| 1. doctor's waiting room | 4. stop signs |
| 2. fire engines | 5. this room |
| 3. your room at home | 6. record album covers |

PRE-VISIT

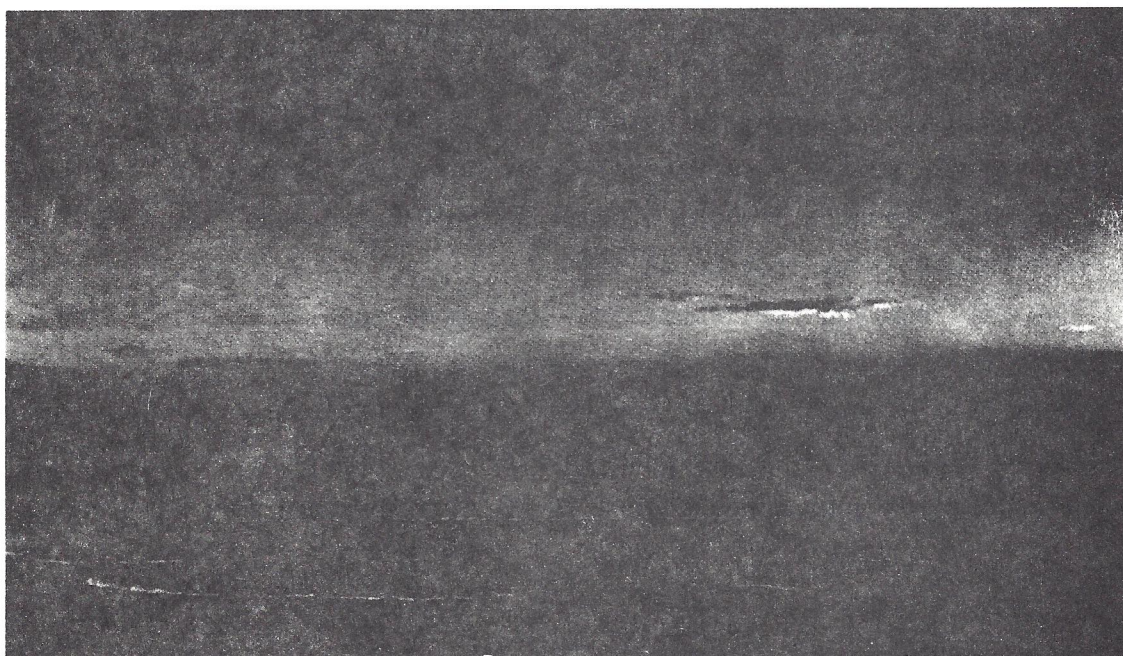
S.F. MUSEUM OF MODERN ART

EXERCISE: Make a drawing in which you use color to show warmth or coolness, to relax or attract attention.

Show your drawing to the class and explain why you used the colors you did.



DEUCE
Stuart Davis



TWILIGHT,
SPOUTING ROCK
BEACH
Martin Johnson
Heade

FACTS AND FEELINGS - SEEING IN NEW WAYS

Imagine you have just seen an accident. You want to record exactly what happened. You must be able to answer the questions: Who had it? What happened? When did it happen? Where? Why? How?

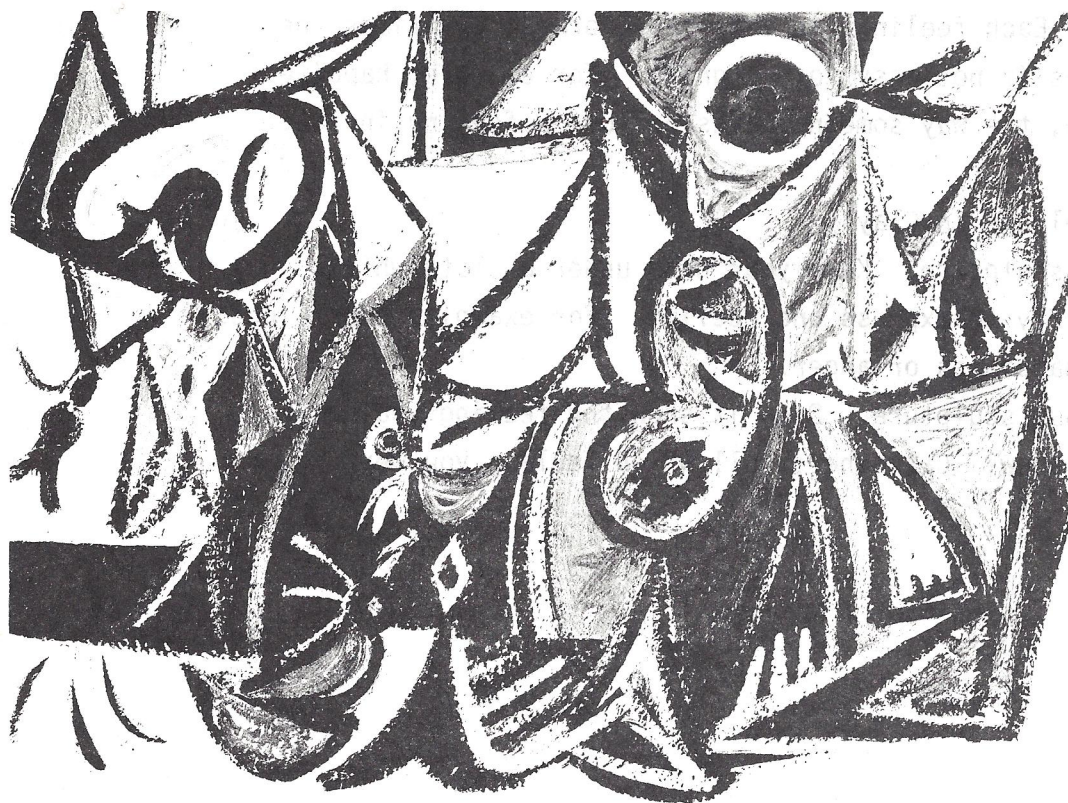
Being aware, being an observer of the world, is not only the job of a news reporter. It is also an important part of being an artist. But while a careful news reporter would give you only the facts, an artist could give you the facts and would probably offer his personal feelings and opinions as well.

When someone takes a photograph of a scene, you usually see things exactly the way they looked in person. When an artist paints or draws a scene, he might change things to create a certain mood or feeling. For example, he could paint a dark, grey sky to make the accident seem completely miserable - even if the day it happened was bright and sunny! The artist told the truth in the painting. It was a miserable day, a miserable happening. However, he changed the facts as he showed his feelings.

EXERCISE: Get the Facts - Give Your Feelings

On the next page are two pictures - one is realistic and the other is abstract. Do the following for each of them:

1. Describe the painting in detail: What's in it (the subject)? How is it arranged? What does the texture look like (rough, smooth, etc.)? What else can you tell about it by looking at it?
2. Now tell how you feel about it. What mood does it seem to create? Happy? Sad? Serious? Does it seem calm or excited? Do you feel calm or excited by looking at it? Write down any feelings at all that come to your mind. There is NO right answer!

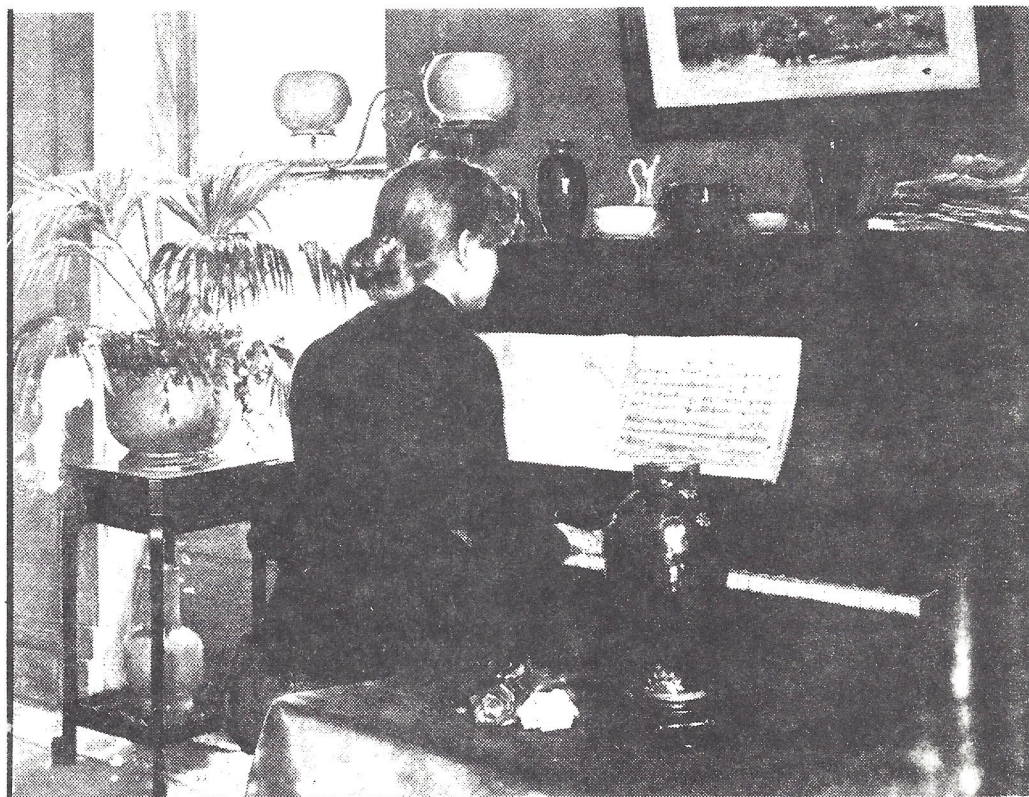


ENIGMATIC COMBAT

Arshile Gorky

MOMENT MUSICALE

Charles Frederick
Ulrich



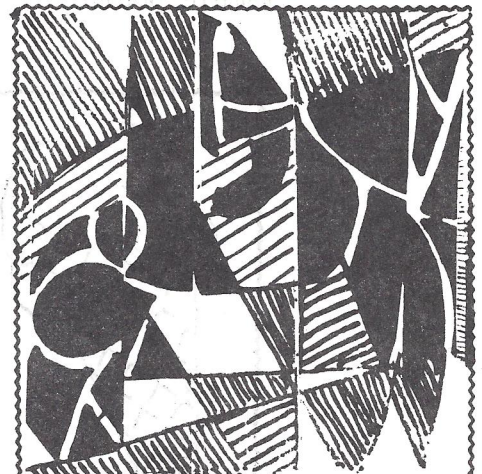
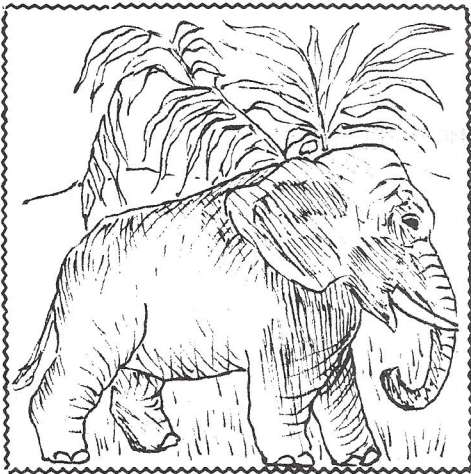
Feelings are REAL. Each feeling can take many forms. Sometimes the form a feeling takes is not easy to recognize. For example, happiness may show in a smile, the way someone walks or just a feeling inside.

EXERCISE: Feelings in Clay

1. Do a clay sculpture. Keep your hand under a cloth while working. Try to express one feeling. For example: hopefulness, sadness, happiness or anger.
2. Uncover your sculpture. Does it show the feeling you were trying to show? Can others tell which feeling you were trying to show?

The more an artist shows LESS of what he sees and MORE of what he feels, the more his work will be a picture of his mind. His work will probably be more ABSTRACT as he concentrates on the world of his ideas and feelings instead of the "real", visual world.

An artist makes choices of what he wants to show and how he wants to show it. For example, he can draw a whole elephant, or he can show what he feels is the most important thing about an elephant; maybe only a trunk and a large ear. Or maybe, the artist will draw the way he feels about the elephant... Then the picture might be some heavy, streaky lines. The last example is a complete ABSTRACT picture of the elephant.



EXERCISE: An Artist Makes Choices

You be an artist. Choose what is important and draw it.

Choose what is not important and leave it out.

Draw an object (or animal) in 3 stages. Use the elephant as an example.

1st: the "real" image

2nd: the most important things about the object (or animal)

3rd: an abstract of the object (or animal)

EXERCISE: Making Choices with Words

Use the following form to write a poem. It will have 3 images just like the pictures you just drew. You may use the same object you drew or choose any other object or idea.

FORM: 1st line: Name the object or idea

2nd - 4th lines: Describe the most important things about it. Use colorful words that will give the reader a "view" of the object.

5th line: Use words that describe how you feel about the object or idea (or how it feels to you).

Example poem:



ICE CREAM

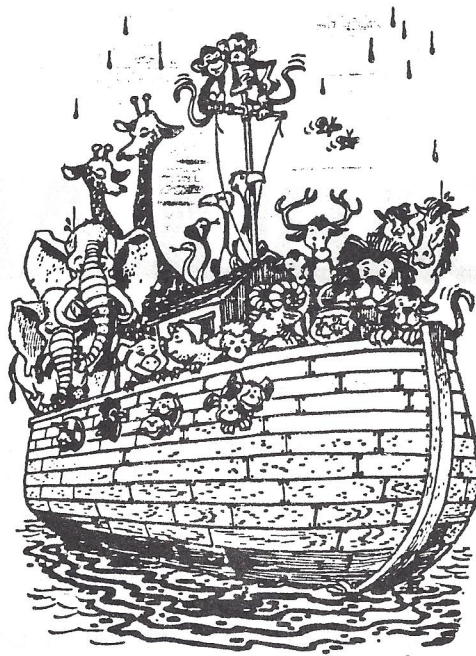
CHILLED COLORED ICE

SWEET GOOEY MILK

STICKY DRIPS THAT MAKE ME FEEL WARM

LICKS, LICKS, LICKS

SAN FRANCISCO ZOOLOGICAL SOCIETY



THE SAN FRANCISCO ZOO HOUSES OVER 1,000 BIRDS AND MAMMALS ON 65 ACRES OF LAND. THE CITY OF SAN FRANCISCO MAINTAINS THE MAIN ZOO WHILE THE SAN FRANCISCO ZOOLOGICAL SOCIETY OPERATES THE CHILDREN'S ZOO. THE ZOO SOCIETY PROVIDES MANY SERVICES FOR ZOO VISITORS, INCLUDING GUIDED TOURS FOR SCHOOL CHILDREN. WHEN YOU VISIT THE ZOO, BE SURE TO SEE OUR NEWEST EXHIBITS: WOLF WOODS, MUSK OX MEADOW, GORILLA WORLD AND THE INSECT ZOO.

A ZOOCABULARY

The following is a list of words we will use to talk about endangered animals. Be sure that you understand the meaning of each of these words, and can use it in a sentence.

caribou - a large hoofed animal used as food by wolves and Eskimos

carnivore - meat-eater

conservation - a practice of protecting our natural resources

domestic animals - animals kept and bred by people for food, work, pets, etc.; includes all farm animals

ecology - the relationship between living things and their environment

endangered - in danger of becoming extinct

environment - all conditions surrounding and affecting an animal

exhibited - shown, displayed

extinct - no longer alive, a word used to describe species that have no members alive today

food chain - a series of events where a herbivore eats a plant and then a carnivore eats the herbivore

forage - look for food

habitat - natural home; examples: arctic, desert, jungle, forest, etc.

hemisphere - half of a sphere, usually used to describe a part of the earth

ignorance - lack of knowledge

pesticide - a chemical used to kill living things that are considered pests, usually insects

predator - hunter, meat eater

prejudice - an opinion or belief formed before any real information is known

prey - the hunted, an animal that is used for food by a predator, usually a plant eater

principal - most important; for example, the principal reason animals become endangered is because their homes are destroyed

species - a group of highly similar plants or animals that breed and reproduce themselves in nature

stereotype - a fixed and simple idea that is rarely fair or correct; for example, "all redheads have bad tempers"

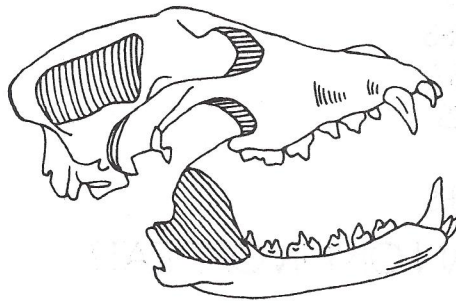
superstition - a belief based not on fact but on fear

tundra - flat, treeless plains of the arctic regions

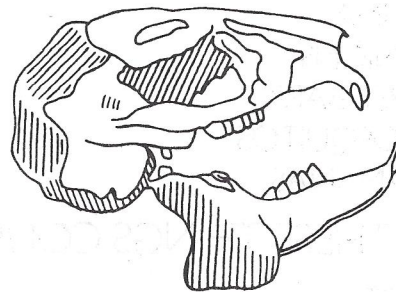
MEAT OR POTATOES

ANIMALS MUST EAT TO LIVE.
SOME ANIMALS EAT PLANTS.
SOME ANIMALS EAT PLANTS AND ANIMALS.
IF YOU LOOK AT THEIR TEETH,
YOU CAN TELL WHAT KINDS
OF FOOD THEY LIKE TO EAT.

MEAT EATER
(A Dog Skull)



PLANT EATER
(A Rabbit Skull)



A PLANT EATER IS CALLED AN HERBIVORE.
A MEAT EATER IS CALLED A CARNIVORE.

CIRCLE THE ANSWER:

LION
COYOTE
TIGER
TURTLE
RABBIT
SNAKE
GOAT
BOBCAT

CARNIVORE
CARNIVORE
CARNIVORE
CARNIVORE
CARNIVORE
CARNIVORE
CARNIVORE
CARNIVORE

HERBIVORE
HERBIVORE
HERBIVORE
HERBIVORE
HERBIVORE
HERBIVORE
HERBIVORE
HERBIVORE

USE A MIRROR. LOOK AT YOUR TEETH. DO YOU EAT PLANTS?
DO YOU EAT ANIMALS? WHAT KINDS OF FOOD DO YOU EAT?

MEAT AND POTATOES

WHICH OF THESE THINGS COULD A CARNIVORE EAT?

TOMATO SOUP
GRAPEFRUIT
LETTUCE
CORNFLAKES
BEANS
DANDELIONS
DEER

HAY
BEEF
SHRIMP
ORANGES
TURKEYS
CHERRIES
ZEBRAS

WHICH OF THESE THINGS COULD AN HERVIVORE EAT?

HAMBURGER
TUNA
ONIONS
TREE BARK
MOSQUITOS
BANANAS

NUTS
DAISIES
GRASS
ROSES
RATS
APPLES

WHICH OF THESE THINGS COULD AN ONMIVORE EAT?

PIZZA
CHILI
HONEY
RAISINS
PENCILS
SNAILS
CUCUMBERS

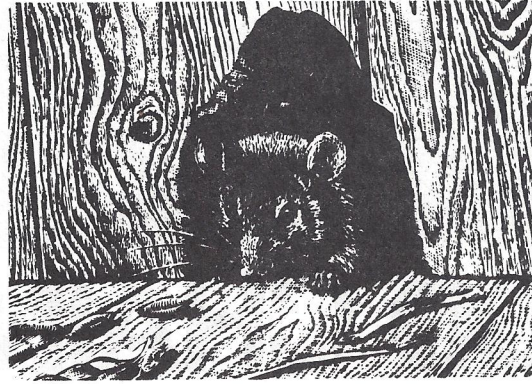
BEES
DOOR KNOBS
MILK
CARROTS
PIGS
SEEDS
NAILS

NAME FOUR ANIMALS THAT ARE CARNIVOROUS.

NAME FOUR ANIMALS THAT ARE HERBIVOROUS.

NAME FOUR ANIMALS THAT ARE OMNIVOROUS.

WHICH ONE ARE YOU?

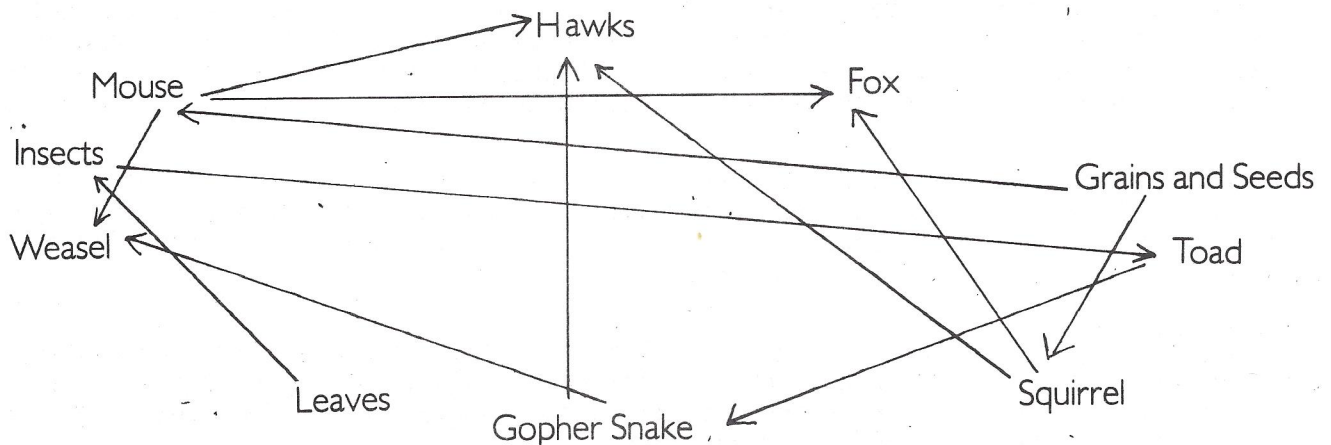


WEBS & CHAINS

Discuss what might happen if each of the following situations occurred in California.

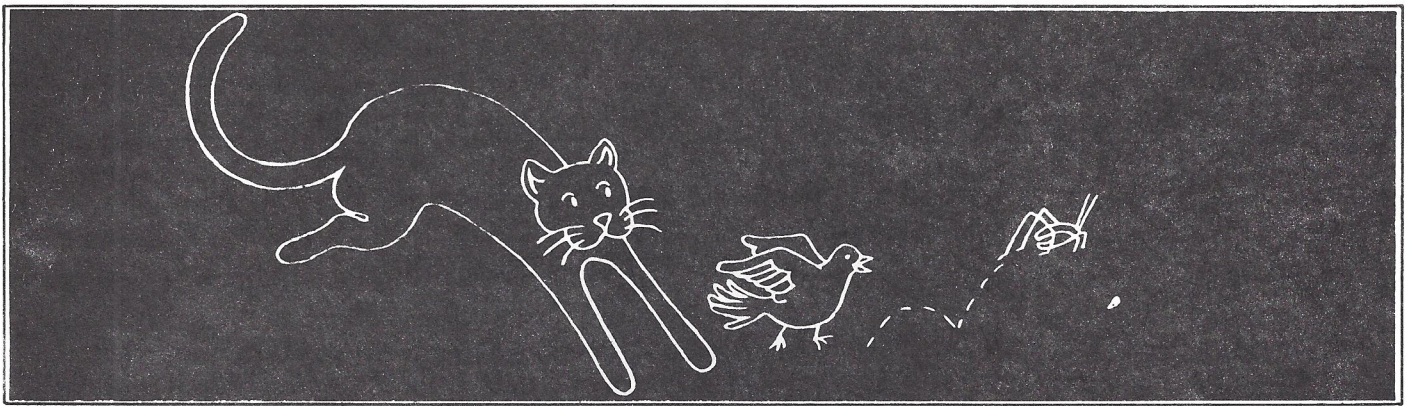
- 1) All the insects are poisoned by insecticides.
- 2) A strange disease has killed all the mice and rats.
- 3) All the trees have been cut down to build houses.
- 4) All the foxes and hawks have been killed by hunters.
- 5) Humans discover a drug that lets them live forever.

One person make a nametag for each of the animals and plants listed on the page "Bay Area Food Chains". Pin one on each student. Give each person several long lengths of yarn of the same color. Divide into groups of ten. Create a food web by giving one end of a piece of their yarn to another student wearing the name of an animal or plant that might be in their food chain. Here is a diagram of a food web you might have formed.



Talk about your food web and decide what needs to be added. For example, the web shown above needs more kinds of plants.

Does the food web show how living things depend on each other better than a food chain? Why?



FOOD CHAIN GAME

MATERIALS:

Sashes or paper arm bands in three different colors. Have enough sashes for $\frac{3}{4}$ of the group to be grasshoppers, $\frac{1}{3}$ birds, and $\frac{1}{3}$ cats. This lets you change the size of the groups later.

Plastic sandwich bags, enough for one for each student. Place a strip of masking tape across the sandwich bag 4 cm. from the bottom of the bag.

4-5 liters of popped corn.

Paper and pencil to record results.

Kitchen timer with a bell.

SITE:

A patch of grass or playground section about 15 meters on a side is ideal.

THE GAME:

- 1) Describe the boundary of the game area. Spread popcorn over the area (save some for later). Tell the group the popcorn represents plants that grasshoppers eat.
- 2) Hand out a plastic bag and grasshopper sash (all 1 color) to $\frac{1}{3}$ of your group. Tell the students to put their food (popcorn) in their stomachs (bags) when the game starts.
- 3) Hand out bag and a bird sash to another $\frac{1}{3}$ of the group, and cat sashes to the last third. When the game starts, birds try to capture (tag) grasshoppers, and cats chase birds. When bird tags grasshopper, it transfers the grasshopper's bag to its own "stomach". When cat tags bird, it takes bird's "stomach". Cats don't eat grasshoppers in this game.
- 4) State the challenge. Set timer for 5 minutes and yell "Go!". First game usually lasts only a few seconds, with one of two things happening: hoppers are gobbled up before they have a chance to forage, or birds are gobbled up and hoppers continue to gather popcorn.

RESULTS:

How many animals survive? For a hopper to survive, popcorn must fill stomach bag to the bottom of the tape. For a bird to survive, popcorn must fill to top of the tape. Cats must have one bird with enough food to survive. If at least one of each kind of animal survives you have an ongoing food chain.

CHANGING RULES:

Ask for suggestions on rule changes that might result in more of a balance after a 5 minute "day". Usually one rule is changed for each replay. When you've settled your new rules, return the popcorn to the activity area and play again. Some possible rule changes:

- change number of hoppers and/or birds and/or cats;
- let each hopper come back once after being captured and transferring stomach contents;
- provide a safety zone for hoppers;
- timed releases; that is, let hoppers have a 1 minute head start.

Think about your results after each rule change. Compare results and talk about how the game "balance" compares with the balance in the real world.

This is a simplified version of the Lawrence Hall of Science Outdoor Biology Instructional Strategied Food Chain Game.

BAY AREA FOOD CHAINS

ARRANGE THESE ANIMALS AND PLANTS INTO SIMPLE FOOD CHAINS ON THE LINES BELOW. REMEMBER TO PUT LARGE PREDATORS AT THE TOP.

BOBCAT
SEAGULL
RED-TAILED HAWK
SONG BIRD
KESTRAL
GREAT HORNED OWL
FOX
WEASEL

MOUSE
CATERPILLER
SQUIRREL
GOPHER SNAKE
INSECTS
FISH
RABBIT

FLOWER PARTS
LEAVES
AQUATIC PLANTS
SHRUBS
GRASSES
GRAIN AND SEEDS
NUTS AND BERRIES

<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>	<hr/> <hr/> <hr/>
<hr/> <hr/> <hr/> <hr/>	<hr/> <hr/> <hr/> <hr/>	<p>BONUS</p> <hr/> <hr/> <hr/> <hr/>



ENDANGERED SPECIES

EXAMPLE:

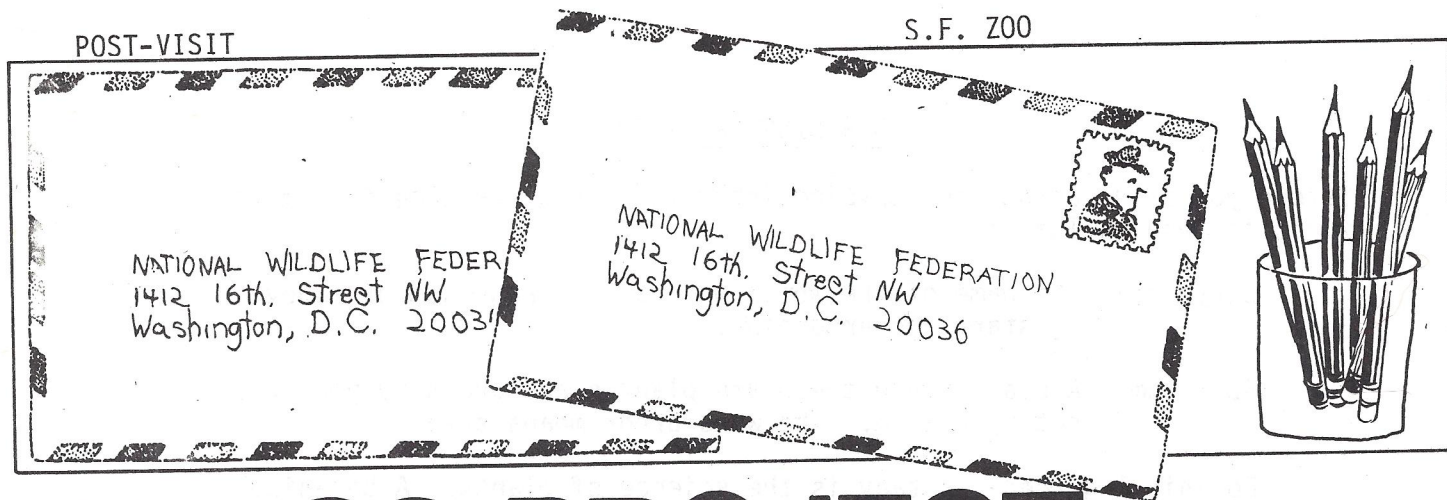
There are numerous endangered species exhibited at the San Francisco Zoo. The newest of these are the timber wolves displayed in the new Wolf Woods area. A stop at this exhibit will be a highlight of your class's tour of the endangered species. Here are some facts about the gray wolf that will help you prepare for your tour.

At one time, wolves roamed over the tundra, plains and forests of most of the Northern Hemisphere. Their numbers have been reduced to a few populations of wolves in Michigan, Minnesota, Alaska and Canada. There are many reasons why the number of wolves has been so greatly reduced:

- 1) superstition - Folk tales and fairy tales give the image of the wolf as a blood thirsty killer. Actually, wolves only hunt for food and healthy wolves have never been known to attack humans.
- 2) prejudice - Farmers get angry at the rare times wolves have come into areas where their natural prey is gone, and the only things left to hunt and eat are domestic animals, like goats or chickens.
- 3) ignorance - Farmers and others do not realize that wolves keep wild animal populations healthy by killing the old and sick animals. This is helpful because it stops them from having more weak or unhealthy babies.

The future of the wolf is not bright. Investigate laws regarding this animal. Here are some other activities your class can do.

- 1) Reread "Little Red Riding Hood" or "The Three Little Pigs". Discuss the role of the wolf. Do these stories portray a stereotyped view of the wolf? Rewrite the story from the wolf's point of view.
- 2) What is the meaning of the Eskimo saying "the wolf makes the caribou strong"? Discuss the role of the predator in the balance of nature.
- 3) Listen to the Language and Music of Wolves (narrated by Robert Redford, Columbia Records C30769). Discuss communication between animals.
- 4) Write an illustrated story where the wolf is the main character and comes out alright at the end. Put your story together with everyone else's and make a book out of them.



CLASS PROJECT:

Animals in danger of vanishing forever are called endangered species, and many of these animals live in the United States. Here are some activities your class can do to learn more about endangered species.

- 1) Select an animal law that is being considered by state or local government. Bring in articles from magazines and newspapers and share them with the class. There are a great many of these so it should be easy to find enough for a class scrap-book or bulletin board.
- 2) Can you name any of the animals that are endangered and live in the United States? Do you know what caused this problem? Is there anything you can do to prevent it? You can find the answers to these questions by writing to the following agencies for information:

National Wildlife Federation
1412 Sixteenth Street, NW
Washington, D.C. 20036
Booklet: "Endangered Species of the U.S."

Department of the Interior
Information Service
U.S. Fish and Wildlife Service
Washington, D.C. 20240
Pamphlet: "Facts About the Federal Wildlife Laws"

Humane Society of the United States
2100 L Street, NW
Washington, D.C. 20037
Pamphlet: "Animals: The Vanishing Americans"

STRYBING ARBORETUM

Before you study about the Strybing Arboretum, here are some important words for you to learn:

- Strybing- The name of the woman who gave a large sum of money to start the Arboretum.
- Aboretum- A place where trees are planted and grown by persons, not by nature. The word arbor means tree.
- Botanical garden- Botany is the science of plants. A botanical garden, besides having trees, is a place where shrubs and smaller, softer plants are grown, too, so that they can be studied and preserved.

Golden Gate Park is a little more than one hundred years old. Although it was once mostly sand dunes, it is now covered with many shrubs and trees, each one carefully planted.

Strybing Arboretum and Botanical Gardens is a very special part of Golden Gate Park. It covers sixty-five acres and has plants from every corner of the world: Europe, Asia, South America, South Africa, Australia, New Zeland. We call the Arboretum a living library of plants because it does much the same things as a library. Unusual, even rare and endangered plants are grown here so they may be studied and enjoyed whenever a visit is made.



EXERCISE: Here are pictures of the five state treasures. You will also see them in the Arboretum. See if you can figure out why they were chosen.

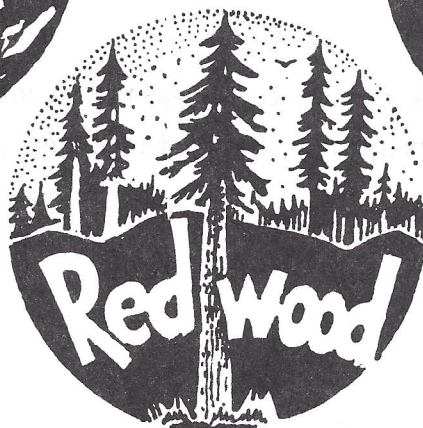
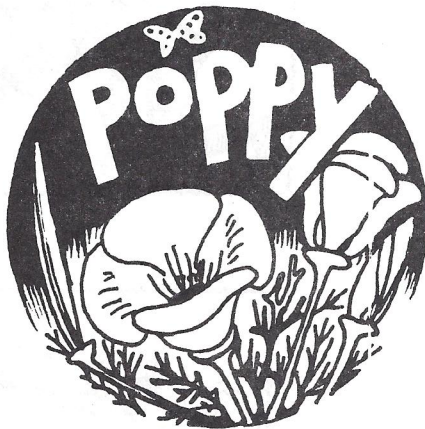
State bird: California quail

State flower: California poppy

State tree: Coast redwood

State grass: Needle grass

State rock: Serpentine



When you visit the Arboretum, the docent guides will take you on a "Walk in California" on which you'll visit the Arthur Menzies Native Garden. Like people, plants come from, or are native to, certain geographic areas. The plants in the Menzies Garden grow naturally in California from many different parts of the state: coast, valley, hills, mountains, and even desert.

These plants are California TREASURES.

1. We can make the traditions of the California Indians real by using the same plant materials that they once used and which are growing in California today.
2. The history of plant collection is important today because we must continue to protect our unusual, rare and endangered species (plant types).
3. You can see that plants, like people, live in communities together; that they learn to adapt (change so they can get along) to their environment; and they often depend on each other in order to survive.



In the Arboretum you will have a chance to be really involved with the materials- the plants. Sight, hearing, smell, taste and touch are all part of the experience.

PRE-VISIT

STRYBING ARBORETUM

EXERCISE: STRETCH your IMAGINATION! Imagine you are an explorer and you have just come upon a new land. There are plants and birds and animals like you have NEVER seen before (even their colors and sizes are different).

1. Choose a state bird. Draw a picture of it.
2. Choose a state flower. Draw a picture of it.
3. Be OUTRAGEOUS!
4. Show your pictures to your class.

EXERCISE: Find a book about the California Indians from our area. Learn about how they used plants. Pretend you have to use plants growing here for shelter, clothing, medicine, basketry, food, etc.

What kinds of plants would you use for these purposes?

* * * * *

ACTUAL VISIT

"A Walk in California"

This docent-led walk takes you through the California Native Section in the Arboretum, where you will discover the five state treasures that have a special home here. You will see many plants that have been collected from different habitats (where plants live naturally) in the state of California and learn how they have adapted to their environment for survival. Quite a few of these were treasured by the California Indians because they depended on them for shelter, clothing, food, medicine, etc.

POST-VISIT

STRYBING ARBORETUM

EXERCISE: Create your own walk by imagining you were going to travel from the ocean inland across the hills. Draw a diagram of what kinds of plants you would pass through and what the country would look like.

(Hint: Would the countryside be flat, hilly, mountainous?)

See if you can match some plants to each community.

EXERCISE: Match the five state treasures (California Quail, etc.) with the area and habitat (environment) they come from.

If you have done the above exercise, tell where these state treasures would appear on your diagram.

EXERCISE: You will be given a small packet of Indian use plants to make into a small collection of Indian artifacts (practical, useful objects of cultures that no longer exist)

Arrange these according to the uses they had. See if you can find other plant treasures used by the Indians and find some of them to add to your collection.

TEACHER'S SUPPLEMENTARY GUIDE
to
MUSEUMS AND CULTURAL INSTITUTIONS

Project Coordinator
Editor
DIANA SULLIVAN

Project Director
GAIL EVENARI

Clerical Assistant
DEBORAH OGDEN

The Teacher's Supplementary Guide to Museums and Cultural Institutions has been developed to give teachers background information on each institution in the MAPS program. The following data is included:

Tour descriptions
Scheduling specifications
General program information
Lending arrangements

With grateful acknowledgement to the contributions of the following people who represent the participating institutions of
MUSEUMS AFFILIATED WITH PUBLIC SCHOOLS:

Maggie Brooks
Beverly Bubar
Diane Butler
Vivian Chang
Kim Combs
Marge Crawford
Frank Dean
Robert Flasher
Lois Gordon
Miriam Grunfeld
John Gruver
Giuliana Haight
Charlie Hawkins
Barbara Henry
Bea Hocker
Holly Holtz
Robert Kirby
Ross Kleinschmidt

Steve Knotek
Mark Luca
Judith Lynch
Ralph Maradiaga
George Martinez
Olga Melko
Pam Minor
Mia Monroe
Ricky Moss
David Nettel
Brandy Pound
Lynn Rankin
Tirtza Rosenberg
Eric Saul
Monica Scott
Nora Wagner
Robert Whyte
Ronald Wogaman

TEACHER'S SUPPLEMENTARY GUIDE

to

MUSEUM AND CULTURAL INSTITUTIONS

Project Coordinator
Editor
LEWIS SULLIVAN

Clerical Assistant
DEBORAH ORLEN

Project Director
GAIL EVIARI

The Teacher's Supplementary Guide to Museums and Cultural Institutions has been developed to give teachers background information on each institution in the MHC program. The following data is included:

- 1. Descriptions
- 2. Scheduling specifications
- 3. General program information
- 4. Funding arrangements

With grateful acknowledgment to the contributors of the following people who represent the participating institutions of MHC AFFILIATES WITH PUBLIC SCHOOLS:

Steve Kowitz
Jack Linn
Johanna Lynch
Ralph Mandel
George Marshall
Olga Melko
Pat Miller
Mia Monroe
Nicky Moss
David Neff
Brenda Paine
Lynn Paskin
Tina Rosenblatt
Eric Saul
Monty Scott
Mory Winer
Robert Witten
Ronald Woodman

Harold Brown
Beverly Rubin
Liane Butler
Kathy Chang
Kim Cox
Marge Crawford
Frank Dean
Robert Fisher
Lyle Gordon
Marilyn Grunfeld
John Gruber
Gail Hargis
Charles Hawkins
Barbara Henry
Bar Hocker
Kathy Kell
Robert Kell
Ross Kell

INTRODUCTION

In January of 1977, museum educators from several institutions met to discuss the possibilities for a museum/ school collaboration. San Francisco School Volunteers, an agency with years of experience in linking the schools with museum resources, was asked to join the group.

With the assistance of San Francisco Unified School District Curriculum Department, the representatives from each institution investigated ways in which their educational programs might be integrated into the elementary school curriculum. The product of these combined energies was the first California Treasures Curriculum Resource Guide.

This nucleus of museum educators called itself Museums Affiliated with Public Schools (MAPS). The group continued to meet with the common commitment of pooling their resources to make a more significant impact on the education of children. As the MAPS committee expanded its size and scope, it took the name Cultural Connections, leaving the museum/ school project with the name MAPS. Cultural Connections continues to serve as an Advisory Committee for MAPS.

In 1980, School Volunteers (with the collaboration of Cultural Connections) received a grant from the National Endowment for the Humanities. The funding provided for the hiring of staff to create curriculum and schedule visits for classes in the San Francisco Unified School District. MAPS has grown from 6 to 34 participatory programs; including such varied experiences as a visit to Fort Point National Historic Site, a walking tour of Victorian Houses and a trip to the Presidio Army Museum to learn about the Great Earthquake and Fire of 1906.

The San Francisco: Our City (3rd grade) and California Treasures (4th grade) curriculum workbooks contain very little duplication in material. This allows teachers who have both books to select from a wide spectrum of resources. The data and exercises can be adapted for students through junior high and even high school. A 6th grade curriculum, Signs and Symbols, will be developed in 1981-82.

INTRODUCTION

In January of 1977, museum educators from several institutions met to discuss the possibilities for a museum school and to determine the feasibility of such a program. An agency with years of experience in linking the schools with museum resources was asked to join the group.

With the assistance of San Francisco Unified School District Curriculum Department, the representative from each institution investigated ways in which their educational programs might be integrated into the elementary school curriculum. The product of these combined energies was the first California Museum School Curriculum Framework.

This nucleus of museum educators called itself Museum Affiliates with Public Schools (MAPS). The group continued to meet with the common commitment of seeking ways to make a more significant impact on the education of children. As the MAPS members expanded their size and scope, they took the name Cultural Connections, leaving the museum school project with the name MAPS. Cultural Connections continues to serve as an advisory committee for MAPS.

In 1980, School Committees (with the collaboration of Cultural Connections) received a grant from the National Endowment for the Humanities. The funding provided for the hiring of staff to create curriculum and schedule visits for classes in the San Francisco Unified School District. MAPS has grown from a few participating programs including such varied experiences as a visit to Fort Point National Historic Site, a walking tour of Victorian houses and a trip to the Presidio and beyond to learn about the great natural and historic sites.

The San Francisco Unified School District and California Treasures (with other museum workshops) contain very little duplication in material. This allows teachers who have both books to select from a wide spectrum of resources. The data and exhibits can be shared for students through a joint visit and even in a school. A fifth grade curriculum series and a symbols will be developed in 1981-82.

TABLE OF CONTENTS

Alcatraz Island-----	1
Asian Art Museum-----	2
Cable Car Barn and Museum-----	4
California Academy of Sciences-----	5
California Historical Society-----	7
California Palace of the Legion of Honor-----	9
Chinese Culture Center-----	10
City Guides - Friends of the Library-----	11
City Hall-----	12
Costume Bank-----	14
M.H. De Young Memorial Museum - Fine Arts Museums-----	15
Exploratorium-----	17
Fire Department Museum-----	20
Fort Funston - Baker Beach - Land's End-----	22
Fort Mason-----	25
Fort Point National Historic Site-----	27
Galeria de la Raza-----	30
Golden Gate National Recreation Area-----	32
Josephine D. Randall Junior Museum-----	33
Mexican Museum-----	34
Mission Dolores-----	36
Museo Italo Americano-----	37
National Maritime Museum and Hyde Street Pier-----	39
Oakland Museum-----	41
Old Mint Museum-----	42
Presidio Army Museum-----	43
San Francisco African American Historical and Cultural Society-----	44
San Francisco Museum of Modern Art-----	45
San Francisco Zoo-----	47
Strybing Arboretum-----	49
Temple Emanu-El-----	51

TABLE OF CONTENTS

1	Alcatraz Island
2	Asian Art Museum
3	Cable Car Route and Museum
4	California Academy of Sciences
5	California Historical Society
6	California Palace of the Legion of Honor
7	Chinese American Museum
8	City Hall
9	Exploratorium
10	Fort Point National Historic Site
11	Golden Gate National Recreation Area
12	Japanese American National Museum
13	Lincoln Center
14	Museum of Modern Art
15	Palace of Fine Arts
16	San Francisco Asian American Historical and Cultural Center
17	San Francisco Chinese American Museum
18	San Francisco Japanese American Museum
19	San Francisco Latin American Museum
20	San Francisco Museum of Modern Art
21	San Francisco Museum of Science and Industry
22	San Francisco Museum of Art
23	San Francisco Museum of History and Art
24	San Francisco Museum of Contemporary Art
25	San Francisco Museum of African American History and Culture
26	San Francisco Museum of Jewish History and Culture
27	San Francisco Museum of Italian History and Culture
28	San Francisco Museum of Mexican History and Culture
29	San Francisco Museum of Puerto Rican History and Culture
30	San Francisco Museum of Vietnamese History and Culture
31	San Francisco Museum of Korean History and Culture
32	San Francisco Museum of Chinese History and Culture
33	San Francisco Museum of Japanese History and Culture
34	San Francisco Museum of Indian History and Culture
35	San Francisco Museum of Native American History and Culture
36	San Francisco Museum of African American History and Culture
37	San Francisco Museum of Jewish History and Culture
38	San Francisco Museum of Italian History and Culture
39	San Francisco Museum of Mexican History and Culture
40	San Francisco Museum of Puerto Rican History and Culture
41	San Francisco Museum of Vietnamese History and Culture
42	San Francisco Museum of Korean History and Culture
43	San Francisco Museum of Chinese History and Culture
44	San Francisco Museum of Japanese History and Culture
45	San Francisco Museum of Indian History and Culture
46	San Francisco Museum of Native American History and Culture
47	San Francisco Museum of African American History and Culture
48	San Francisco Museum of Jewish History and Culture
49	San Francisco Museum of Italian History and Culture
50	San Francisco Museum of Mexican History and Culture
51	San Francisco Museum of Puerto Rican History and Culture
52	San Francisco Museum of Vietnamese History and Culture
53	San Francisco Museum of Korean History and Culture
54	San Francisco Museum of Chinese History and Culture
55	San Francisco Museum of Japanese History and Culture
56	San Francisco Museum of Indian History and Culture
57	San Francisco Museum of Native American History and Culture
58	San Francisco Museum of African American History and Culture
59	San Francisco Museum of Jewish History and Culture
60	San Francisco Museum of Italian History and Culture
61	San Francisco Museum of Mexican History and Culture
62	San Francisco Museum of Puerto Rican History and Culture
63	San Francisco Museum of Vietnamese History and Culture
64	San Francisco Museum of Korean History and Culture
65	San Francisco Museum of Chinese History and Culture
66	San Francisco Museum of Japanese History and Culture
67	San Francisco Museum of Indian History and Culture
68	San Francisco Museum of Native American History and Culture
69	San Francisco Museum of African American History and Culture
70	San Francisco Museum of Jewish History and Culture
71	San Francisco Museum of Italian History and Culture
72	San Francisco Museum of Mexican History and Culture
73	San Francisco Museum of Puerto Rican History and Culture
74	San Francisco Museum of Vietnamese History and Culture
75	San Francisco Museum of Korean History and Culture
76	San Francisco Museum of Chinese History and Culture
77	San Francisco Museum of Japanese History and Culture
78	San Francisco Museum of Indian History and Culture
79	San Francisco Museum of Native American History and Culture
80	San Francisco Museum of African American History and Culture
81	San Francisco Museum of Jewish History and Culture
82	San Francisco Museum of Italian History and Culture
83	San Francisco Museum of Mexican History and Culture
84	San Francisco Museum of Puerto Rican History and Culture
85	San Francisco Museum of Vietnamese History and Culture
86	San Francisco Museum of Korean History and Culture
87	San Francisco Museum of Chinese History and Culture
88	San Francisco Museum of Japanese History and Culture
89	San Francisco Museum of Indian History and Culture
90	San Francisco Museum of Native American History and Culture
91	San Francisco Museum of African American History and Culture
92	San Francisco Museum of Jewish History and Culture
93	San Francisco Museum of Italian History and Culture
94	San Francisco Museum of Mexican History and Culture
95	San Francisco Museum of Puerto Rican History and Culture
96	San Francisco Museum of Vietnamese History and Culture
97	San Francisco Museum of Korean History and Culture
98	San Francisco Museum of Chinese History and Culture
99	San Francisco Museum of Japanese History and Culture
100	San Francisco Museum of Indian History and Culture

ALCATRAZ ISLAND

ALCATRAZ ISLAND was first sighted by Spanish explorers in 1775. A bleak sandstone rock used for roosting and nesting by seagulls, cormorants, and pelicans, the island remained undisturbed until it was chosen as the site for a lighthouse and fort to be built by the United States Army. The fortifications were completed in 1858. Prisoners were first confined on Alcatraz during the Civil War. Between 1870 and 1900, American Indian prisoners, military prisoners and pacifists were held on Alcatraz Island. Construction of the present main prison building was completed in 1912. In 1934 the Federal Bureau of Prisons converted the barracks into a maximum security, minimum privilege, male penitentiary for the hard-core gangsters and criminals of the time. Its notoriety as "The Rock" outpaced its tenure, which lasted less than 30 years. It housed such felons as Al Capone, "Machine Gun" Kelly, "Doc" Barker, Robert "Birdman" Stroud and Morton Sobell. Due to the high cost of operating Alcatraz and the deteriorating condition of the buildings the prison was closed in 1963. About 100 American Indians occupied and claimed the island in November of 1969. Their desire was to establish a cultural center there. The occupants were removed in March of 1971. In 1973, Alcatraz was included in the Golden Gate National Recreation Area and is currently being operated by the National Park Service.

Today, tours of Alcatraz are conducted by National Park Service rangers. The main subject of the tours is the Federal Prison Era, with the majority of the tour conducted within the prison cell house. The rangers explain to the visitors the purpose, regulations, and day-to-day routine of Alcatraz Federal Penitentiary. The tour also covers the early military history, the Indian occupation, and natural history of the island. It ends in a small exhibit area which contains photographs of Alcatraz during the Military and Federal Prison Eras.

Daily guided public tours of Alcatraz take approximately two hours from dock to dock. There is a charge for transportation to the island. For school groups of 25 or more the charge is \$2.50 for each adult and \$1.25 for each child 5-11 years old. There must be one adult for every five students. Boat reservations may be obtained by calling (415) 546-2805 or writing Harbor Carriers Inc., Pier 41, San Francisco, CA. 94133.

Separate tours covering either the geological history or the birds of Alcatraz are occasionally given (upon request) to special groups. Arrangements for these special tours should be made well in advance by contacting the Alcatraz District Ranger at 556-0560.

GGNRA, Fort Mason
San Francisco, CA 94123
(415) 556-0560
Contact: Bob Kirby

THE ASIAN ART MUSEUM

The ASIAN ART MUSEUM of San Francisco is the only museum in the United States devoted exclusively to the arts of Asia. Its construction was the subject of a 1960 city bond issue which won overwhelming approval from voters. This provided a permanent home for the collection of Asian art given to the City and County of San Francisco by the late financier and president of the International Olympic Committee, Avery Brundage. Approximately 95 % of the museum's holdings come from Brundage's collection, the rest from other donors and from museum purchases supported by a variety of patrons.

The museum houses over 10,000 objects representing the geographical expanse of Asia itself, from Iran in the west to Japan in the east, from Mongolia in the north to Indonesia in the south. These objects are grouped into the following categories: China, Korea, Japan, India, the Himalayas, Southeast Asia and the Middle East. They cover 5,000 years of Asian history, from the 4th millenium B.C. to the present, and include a wide range of artistic forms, from esoteric Buddhist tanka paintings of Tibet to intimate and tactile tea ceremony ceramics of Japan, from the earliest dated Chinese Buddha figure, an anonymous product of 338 A.D., to paintings by living Chinese artists.

Museum hours are 10-5 daily. Entrance is free on the first Wednesday of each month. At all other times admission is adults (18-64) \$1.50; youths (5-17) 50¢; children (under 5) free; members free.

The museum library is open to the public from 1-4:45 p.m. Monday through Friday (City holidays excepted).

Golden Gate Park
San Francisco, CA 94118
(415) 558-2993
Contact: Holly Holtz

PROGRAMS AT THE ASIAN ART MUSEUM

SCHOOL PROGRAM AND SCHOOL TOURS: School tours, tailor made to the needs of each class (grades 3-12) may be arranged on limited weekdays by calling the Docent Council at (415) 387-5922. A booking one month in advance is requested. Tours usually start at 10 a.m. Special school tours for the deaf are also handled through the same number.

MUSEUM MATERIALS: Written materials for teachers are: Bibliography of Books and Audio-Visual Materials on Asian Art and Culture, 10-Spot Visit to Chinatown and Suggested Classroom Activities in Conjunction with Chinese Festivals, Folk Traditions in Japanese Art. Each costs 50¢. Please order with a stamped, self-addressed envelope. There are also slide sets available for a three-week loan or purchase: The Buddha Image in Asian Art, Man and Nature in Japanese Art, The Uniqueness of Korean Art and The Narrative Art of India and Southeast Asia. The slide packets cost \$1.50 for postage and handling. Contact the museum for more specific information.

WORKSHOPS FOR TEACHERS: Workshops are offered on a variety of themes. It is suggested that you send your name, home and school address to be on the museum's mailing list.

LIBRARY: Specializing in Asian art and culture, the museum's library of non-circulating books is open to the public (adults only) weekdays, 1:00-4:45, except holidays.

LECTURES: Courses, seminars and lecture series on the arts of Asia and the museum's collections are presented by distinguished specialists.

FILMS: Regular film series on the art, history and culture of Asian countries are presented.

THE CABLE CAR BARN AND MUSEUM

THE CABLE CAR BARN AND MUSEUM is in the same building as the working powerhouse that operates the cables of the California, Powell-Hyde and Powell-Mason lines. Cable cars began taking the place of horse cars on the steep hills of San Francisco in 1873. Most of the building was destroyed in the 1906 earthquake and fire, but was rebuilt and was operating again in about a year. The City of San Francisco has been in charge of all the cable cars since 1952. The Cable Car Museum is owned and operated by the Pacific Coast Chapter, Railway and Locomotive Historical Society.

Of special interest in the museum is the balcony view of the cables being drawn in and out of the powerhouse on the huge winders, which were originally steam powered. The museum has many displays of actual cable cars, including the first cable car, scale models, photos of the history of cable cars in San Francisco, maps, and mechanical drawings depicting cable car technology. The museum gift shop is located in a concession stand that was once in the Southern Pacific station at Third and Townsend Streets.

There are educational materials available and a staff that can answer questions. Tours are self-guided since there is no extra staff for this. The hours are 10 a.m. to 5 p.m. October through March and 10 a.m. to 6 p.m. the rest of the year.

1201 Mason Street
San Francisco, CA 94108
(415) 474-1887
Contact: Ross Kleinschmidt

CALIFORNIA ACADEMY OF SCIENCES

THE CALIFORNIA ACADEMY OF SCIENCES, founded in 1853, is the oldest scientific institution in the West. Today its complex of buildings houses seven major research departments, extensive scientific collections, and a large scientific library. Areas available to the public include exhibits of birds and mammals of North America and Africa, earth science, fossils, minerals and botany. Steinhart Aquarium offers living exhibits of fish, reptiles, amphibians and invertebrates, adjacent Wattis Hall of Man is devoted to anthropology, and Morrison Planetarium presents a regular schedule of programs in astronomy and meteorology.

The Academy's education programs are many and varied. Adult education courses in natural history and related subjects are offered along with an extensive selection of travel opportunities which range from day trips to major expeditions. The Junior Academy schedules a full calendar of lecture, lab and field courses during the summer, and on afternoons and Saturdays during the school year, for scientifically curious youngsters aged 6 to 18 years. Morrison Planetarium's programming includes classes in astronomy, meteorology and navigation as well as projected sky shows; hands-on experiences for adults as well as children can be found at the tidepool in the Fish Roundabout and in the Discovery Room; and the Docent Council offers a comprehensive program of guided tours in the exhibit halls for school classes grade three and above, led by museum-trained volunteers who also take enrichment programs in biological and earth sciences to the schools with the Supervan, the docent outreach vehicle.

The Academy is open 10-5 p.m. daily. During the summer months, the hours are expanded to 9-8 p.m. daily.

Golden Gate Park
San Francisco, CA 94118
(415) 221-4214
(415) 221-5100, ext. 254 for reservations
Contact: Diane Butler

PROGRAMS AT THE CALIFORNIA ACADEMY OF SCIENCES

SUPERVAN - Trained volunteers will bring enrichment programs in natural science for classroom presentation at the intermediate grade levels. Programs are available on North American Mammals, Birds, Aquarium Life, Fossils, Geology, Tidepool Animals and the Geography and Wildlife of Africa - each utilizing slides, specimens and discussion. SUPERVAN visits are rapidly booked up for the fall and spring semesters so make certain to reserve early in each semester.

GUIDED TOUR PROGRAMS - Free guided tours by trained volunteers are presented for grades three and above on Tuesday through Friday mornings by advance reservation. Teachers may select one of the following tours for each group of 35 students:

North American Hall
Simson African Hall
Steinhart Aquarium
Fossil Hall
Mineral Hall
Wattis Hall of Man

JUNIOR ACADEMY - Courses are open to students with an interest in the natural world. There are two fees: a membership fee of \$5.00, paid only once a year, and a course fee charged for each course taken. The course fee is usually \$5.00.

MORRISON PLANETARIUM - Five instructive and entertaining school programs are being offered for students in pre-school to 1st grade and for grades 1-3 and 4-6. There are also participatory planetarium shows in which one or two astronomical concepts are dealt with in an activity approach. These are available for Grades 4-6 at a charge of 75¢ per person. Admittance to school shows is by confirmed advance reservations only. Reservations must be made by phone at least one month in advance (even earlier for the April-June period). It is best to plan your visit early in the school year.

In addition to the many programs offered by the California Academy of Sciences there are constantly changing exhibits. Call 221-5100 for additional information.

CALIFORNIA HISTORICAL SOCIETY

The California Historical Society was organized in 1871 and is a nonprofit educational institution with the purpose of collecting, preserving, interpreting, and disseminating information about the history of California. The Historical Society maintains historic properties, a library, manuscript and photograph collections, and Fine Arts and Decorative Arts collections. In addition, it sponsors educational programs and exhibits, and publishes books and other printed materials relative to the history of California.

Library collections range chronologically from 1576 to the present, and cover all 58 counties of California. The materials include 25,000 volumes on California history and a rich variety of rare books, manuscripts, photographs, newspapers, posters and ephemera.

The Fine Arts collections include oil paintings, watercolors, drawings, prints, and letter sheets which offer first-rate examples of works by noted California artists, valuable for their aesthetic merit and as examples of prevailing schools of art throughout California's history. The emphasis of the Fine Arts collections is on the late-nineteenth-century work.

The Society operates a historic site in San Marino as well as a contemporary exhibit gallery and historic photo archive on Wilshire Boulevard in West Los Angeles. There is an active program of traveling exhibits.

The Whittier Mansion is open to the public on Wednesday, Saturday and Sunday from 1-5 p.m.

2090 Jackson Street
San Francisco, CA 94109
(415) 567-1848
Contact: Beverly Bubar

PROGRAMS AT THE CALIFORNIA HISTORICAL SOCIETY

Programs and Tours - History-oriented statewide programming has enabled CHS members to study on location transportation systems including the railroad and aerospace industry, lumbering on the North Coast, commercial fishing, historical preservation, ethnic heritage and architecture, among many other important subjects. For example, one of the recent trips to Death Valley provided CHS members the opportunity to explore and study the history, geology and Indian culture of that region. The annual S.F. Bay Cruise offers a unique glimpse at the urban geography and history of the entire metropolitan Bay complex. Day trips, weekend activities, week-long trips, and free members evenings are offered throughout the year.

Whittier Mansion - This architecturally and historically important historic house museum, built between 1894-96 for Franklin Whittier, an important supplier of paints and varnishes, glass and mirrors, and coal oil and contributor to the growth of San Francisco, is open to the public on Wednesday, Saturday and Sunday afternoons from 1-5 p.m. throughout the year (except holidays). Group tours are conducted by arrangements.

Reference Library- The CHS Library housing one of the finest collections of California historical materials including photographs, maps, posters, newspapers, genealogical records, books, and a library on printing and publishing history. is open to researchers and scholars on Tuesdays through Saturdays from 10 a.m. to 4 p.m.

CALIFORNIA PALACE OF THE LEGION OF HONOR

FINE ARTS MUSEUMS

The CALIFORNIA PALACE OF THE LEGION OF HONOR is unique as the only museum in the United States dedicated to French art. It was given to the City of San Francisco by Mrs. Adolph B. Spreckels and her late husband. When it opened, on November 11, 1924, it was dedicated to the 3600 California men who died fighting in World War I. Mrs. Spreckels loved French culture and art. She had the design of the building adapted from the Palais de Salm in Paris. Napoleon had chosen this Parisian palace as the headquarters for his Legion of Honor in 1804.

Works by painters from the 16th to the 20th centuries are displayed throughout the galleries with special emphasis on the 18th and 19th century artists. Some of them are Corot, Degas, Fragonard, Monet, Pissarro and Renoir. The comprehensive Rodin sculpture is outstanding and French decorative arts are strongly represented. There is an 18th century period room, a gallery exhibiting Medieval and Renaissance decorative arts and the Archenbach Foundation for Graphic Arts. The California Palace of the Legion of Honor has one of the largest graphics collections in the Western states.

On the lower level of the museum are additional exhibition areas and a small theatre for concerts and lectures. Organ recitals are frequently given on weekend afternoons.

Docent tours are available every day. The museum is open from 10 a.m. to 5 p.m. daily.

Lincoln Park
San Francisco, CA 94129
(415) 387-2105
Contact: Lois Gordon

CHINESE CULTURE CENTER

Since its opening in 1973, the Chinese Culture Center has provided the means for presenting Chinese culture to the community through its permanent collections, special exhibitions, educational and performing arts programs and research projects. Its facilities include an auditorium, exhibition galleries, workshops and classroom areas, a research and library reading room, a gallery shop and offices.

Program highlights include: Chinese embroidery and Papercut, Han and T'and Murals from the People's Republic of China, Chinese Folk Gods and Symbols, China Revisited (photo and watercolors). Chinatown, San Francisco: A Photo Journal 1910-1920, The Chinese of America, 1785-1980, and more.

The Center has curricula materials on Chinese music, food, tai-chi chuan and Chinese New Year. It also provides publications which correspond to the exhibits.

Walking tours of Chinatown include the Chinese Heritage Walk and the Culinary Walk. The cost is \$5.00 for adults and \$1.75 for children under 12. Reservations must be made in advance.

750 Kearny Street
Holiday Inn - 3rd floor
San Francisco, CA 94108
(415) 986-1822
Contact: Vivian Chang

CITY GUIDES/FRIENDS OF THE LIBRARY

PROGRAMS OFFERED

FIRE DEPARTMENT MUSEUM - (see description elsewhere)

CITY HALL TOURS/HISTORY OF CIVIC CENTER - (see description elsewhere)

PRESIDIO ARMY MUSEUM - (see description elsewhere)

Tours of this museum can be arranged directly through the museum or through City Guides. The City Guide tours are given on Tuesday, Wednesday or Thursday mornings by prior arrangement.

CITY GUIDES also presents slide shows on the following subjects:

VICTORIAN HOUSES - This is a light-hearted history of the Victorian Era in San Francisco. Emphasis is on increasing visual awareness of San Francisco's legacy of embellished 19th century redwood homes and the roots of the current revival of interest in them. Students will see a film, "HOUSES HAVE HISTORY", which will help them to recognize details and styles.

GREAT GRATES - The History Beneath Your Feet. This slide program shows children the delights of "humble history" - the origin, use and history of common street furniture - fire hydrants, sewer vents, manhole covers and street lamps. It aims at increasing students' interest in the world around them.

LOOKING AT BUILDINGS/LOOKING AT DISTRICTS - This consists of two slide shows that can be presented together. It is most appropriate for 6th grade students. Looking at Buildings teaches the principles of analyzing buildings to recognize style, alterations, use and details. Looking At Districts helps students analyze neighborhoods in San Francisco. It uses specialized vocabulary to give students the verbal tools to describe areas - boundaries, nodes, interrupters, announcers. There will be a discussion of research and field observation, clues about the people, shops, buildings, and character of neighborhoods.

The teacher plus one other adult must accompany the children on the slide show visits. Classes must go to the San Francisco History Room of the Main Library which is available on Wednesday or Friday mornings at 10 or 10:30 a.m., depending on the availability of the rooms in the library. Each slide show takes one hour. They are presented by Judith Lynch, Director of Community Activities, Friends of the Public Library. She can be reached at 558-3981 or 431-7253.

CITY HALL

San Francisco's old CITY HALL came tumbling down in less than 60 seconds at the first shock of the earthquake on April 18, 1906. The new City Hall was designed by the architectural firm of Bakewell and Brown (John Bakewell, Jr. and Arthur Brown, Jr.) Their plan was chosen in a competition which drew 73 entries. It cost \$3.5 million and took three years to build. The building was occupied early in 1916.

The City Hall serves as the centerpiece and focal point of the Civic Center. Its finest feature is the dome which is 39 feet higher than the Capitol's dome in Washington, D.C. Mayor "Sunny Jim" Rolph, a passionate chauvinist, made certain of superiority by checking figures beforehand.

Constructed in an era of architectural lavishness, City Hall is of the "Classical" style, featuring decorative elements of ancient Greek and Roman architecture and designed by architects trained at Ecole des Beaux Arts in Paris, France. It is acclaimed as one of the finest examples of "French Renaissance" architecture in the United States. Its dome is reminiscent of several great cathedral domes of the European Renaissance, including St. Peter's in Rome and St. Paul's in London.

The basic floor plan of the interior is in the shape of a cross. The rotunda space under the dome is a place for grand ceremonies, and its visitors have matched its magnificence. Presidents Taft and Wilson were received here. The funeral of President Harding took place in the rotunda in 1923. Mayor Rolph, who served the City from 1912-1932, lay in state in 1934, as did Mayor Moscone in 1979. On lighter occasions the rotunda hosts concerts and historical pageantry.

On either side of the rotunda are broad public entrance halls with low ceilings, decorated with a forest of Tuscan columns made of Indiana sandstone. Rising from the center of the ground floor is a wide staircase which leads to the Chamber of the Board of Supervisors. The room is lavishly paneled in Manchurian oak, with coffered ceilings, Corinthian pilasters and three arches opposite the entrance leading to a balcony. In the ceiling are oval cartouches, which are carved with a ship, representing the City, sailing through the Golden Gate into the rays of the setting sun.

The general public may view the interior of City Hall, Monday-Friday from 8 a.m. to 5 p.m.

400 Van Ness Avenue
San Francisco CA 94102
(415) 558-3981 or 431-7253
Contact: Judith Lynch

PROGRAM AT CITY HALL

School tours of CITY HALL are available through CITY GUIDES. A CITY GUIDES tour of CITY HALL highlights the rotunda, the Supervisor's Chambers and the Mayor's balcony.

In the Mayor's office, if Her Honor is absent, you may get permission to see her private office, the principal attractions being her own paintings, a desk which belonged to President F.D. Roosevelt, and an oriental carpet she saved from discard which proved to be worth thousands of dollars. Possible additional highlights that need to be negotiated on each visit are a courtroom trip, or a meeting with the Mayor or a Supervisor.

A City Hall tour is given in conjunction with a History of Civic Center tour. Students will take a walk through the Civic Center, which was first a cemetery and then the site of the "old" City Hall. They'll get an introduction to architectural style and detail. This helps children recognize architecture and be aware of buildings. There will be a discussion of government functions in the Civic Center and a discussion on historic landmarks and districts - why San Francisco's old buildings are valuable and should be preserved.

Tours of City Hall take 1½ hours and can be arranged for a Tuesday or Thursday morning. They start at 10:30 a.m. from the San Francisco History Room of the Main Library in the Civic Center. At least three adults must accompany the students on this tour.

The behavior of the students is extremely important on this tour. There is no eating, or running, or reading of materials on people's desks in City Hall offices.

Please be aware that all City Guides are volunteers who show up on the appointed day solely for your class. If, for any reason, you are unable to keep the scheduled appointment, please call Judith Lynch immediately. She can be reached at 558-3981 or 431-7253 (home number). Each phone has an answering machine and it is important that you leave a message at each number if you are not able to speak with her directly.

COSTUME BANK

The COSTUME BANK was created in 1977 as a project of the Neighborhood Arts Program to acquire, store and maintain a collection of costumes, accessories and costume related materials for loan and use by non-profit theater, film, **dance** and other community cultural groups. Research aids, technical expertise and costume shop space is available by special arrangement. Low cost costume construction, workshops and a costumer referral service are also provided for groups or individuals. The ever growing collection of costumes is now in excess of 3000 pieces and comes from the generous donations of theater groups, individuals and professional costume shops. Most of the costumes can be altered to suit the needs of the borrowing group. The Costume Bank is open 10-5, Monday through Friday, and by special appointment.

Western Addition Cultural Center
762 Fulton Street
San Francisco, CA 94102
(415) 921-8722
Contact: Pam Minor

M.H. DE YOUNG MEMORIAL MUSEUM

FINE ARTS MUSEUMS

THE M.H. de YOUNG MEMORIAL MUSEUM had its origin in the California Midwinter International Exposition of 1894, after which the Fine Arts Building was turned over to M.H. de Young, a newspaper publisher who had served as Director-General of the Exposition. Some of the fair's exhibits were acquired as a nucleus collection for the purpose of establishing a permanent museum.

In 1921, upon completion of additional buildings funded by Mr. de Young and other citizens, the Memorial Museum (named to commemorate the Midwinter Exposition) was renamed to honor its benefactor.

The building now contains 200,000 square feet of exhibit area, a reference library, two garden courts, an auditorium, classrooms and offices. In 1977, a suite of galleries for the collections of American art, the most comprehensive in the western states, was opened.

The museum's permanent collection of European art includes works by Rubens, El Greco, Benvenuto Cellini, Fra Angelico, Titian, Goya, Rembrandt, Van Dyck, Gainsborough and others. There are several original period rooms. Collections of traditional arts from Africa, Oceania and the Americas (AOA) are installed in a specially designed gallery.

The museum is open Wednesday-Sunday from 10-5 p.m.

Golden Gate Park
San Francisco, CA 94118
(415) 387-2105
Contact: Lois Gordon

PROGRAMS AT THE FINE ARTS MUSEUMS

CALIFORNIA PALACE OF THE LEGION OF HONOR - M.H. DE YOUNG MEMORIAL MUSEUM

The California Palace of the Legion of Honor and the M.H. de Young Memorial Museum function under one administration, the Fine Arts Museums of San Francisco.

SCHOOL PROGRAM - The school program at the Fine Arts Museums is people working together in the classrooms and museums. It includes workshops for teachers, curriculum material, classroom visits, and small group tours for students in the galleries. Slides and scripts of French, Italian and American art are available for short term loan.

PROGRAM FOR DISABLED STUDENTS - Docents who have received extra training, impart their knowledge of art, culture and history to students who are visually or hearing impaired, or otherwise disabled. They offer gallery tours of the collections at the Fine Arts Museums. In addition to school tours, for those disabled students who would especially benefit from such an experience, there are opportunities to touch sculptures, works of decorative art, furniture, and a collection of African and American Indian art, as well as an opportunity to create their own art. For information please phone Lois Gordon at 387-2105. Call at least three weeks in advance to schedule a museum tour for disabled students.

TEACHER WORKSHOPS - Workshops on a wide range of topics are given periodically throughout the school year. They usually last for four hours and there is a minimal fee charged. Call 387-2105 for a list of upcoming workshops.

SPECIAL PROGRAMS FOR CHILDREN - These programs take place throughout the school year.

AOA GALLERY - There are exhibits here from three distinct cultural and geographic areas: Africa, Oceania and the Americas. Each tour of the AOA Gallery is designed in consultation with the teacher. The docents engage the students in storytelling, music and simple crafts. Students are also allowed to handle selected objects. Docents are available to visit the classroom and present slides of the AOA collection. To schedule a tour or an in-school visit, phone 387-2105 at least three weeks in advance.

THE EXPLORATORIUM

THE EXPLORATORIUM is a museum for touching, hearing, seeing and exploring exhibits in the fields of science, technology and human perception. Participation is the key to the educational value of the Exploratorium. Over 425 exhibits on SIGHT, LIGHT, COLOR, ILLUSIONS, SOUND, HEARING, MUSIC, etc. demonstrate how human perception works and the science underlying perception. The Exploratorium contains as few walls and backstage areas as possible. Visitors can choose their own pathways among the exhibits which are arranged in thematic sections which flow into one another. If help is desired in using and understanding the exhibits, there are numerous "Explainers" on duty just for this purpose.

The Exploratorium is housed in the stately Palace of Fine Arts building which was created by architect Bernard Mayback for the 1915 Panama-Pacific Exposition. The Palace exterior was designed to be a fitting edifice in which to display the highest artistic achievements of the turn of the century. Dr. Frank Oppenheimer was the creator of the Exploratorium and is the Director of this center which is dedicated to exploring the liveliest achievements of modern science, art and technology.

The Exploratorium is open Wednesday-Friday, 1-5 p.m., Saturday-Sunday 12-5 and Wednesday evening from 7-9:30 p.m.

3601 Lyon Street
San Francisco, CA 94123
(415) 563-7337
Contact: Field Trip Schedule Office

THE EXPLORATORIUM
INFORMATION FOR TEACHERS

The Exploratorium is open solely for school visits from October through December on Thursday and Friday mornings from 9:30 to 1:00 p.m. and from January through June on Wednesday, Thursday and Friday mornings from 9:30 to 1:00 p.m. Entry must be reserved by calling 563-7337.

There are no guided tours in the usual sense. School groups arriving for a field trip are greeted at the door by an "Explainer" and are given a brief orientation. They are then free to explore the exhibits on their own, following the urges of their own imaginations as they go.

An admission of \$1.00 per student is charged, with teachers and chaperones admitted free. It is recommended that as many adults as possible accompany the group. After a telephone reservation has been made, confirmation and further information will be mailed prior to the trip. Payment can be made upon arrival by cash or voucher.

The Exploratorium employs a staff of college age Explainers to work closely with the field trips, answering questions and conducting demonstrations on Lasers, Eye Dissections, Sound, etc. They are specially trained to handle diverse groups, and to provide whatever direction is needed while actively encouraging students to rely on their own curiosities. Urge your class to feel free to ask questions and to use the Explainers while they're there.

The Exploratorium is open to the public (including school groups) Wednesday through Friday from 1 to 5 p.m., Saturday and Sunday from 12 to 5 p.m. and Wednesday evening from 7 to 9:30 p.m. Admission to the museum is free to anyone 18 and under. Adult admission is \$2.50. This ticket allows unlimited admission for six months. Admission for adults accompanying groups is \$1.25

The Reflection Exhibit Sheet has been designed for you to use with your students while visiting the Exploratorium. The reflection exhibits are all located in the same area of the museum. The name of each exhibit is listed on the left of the sheet. The last exhibit listed, A Friend's Eye, actually means that you look into your friend's eye to see the reflection. Most of the exhibits have mirrors or reflective surfaces that you can either see or touch. Encourage your students to touch the "mirror" whenever possible so they can feel the shape of the surface. For descriptions of the reflections you can use words like upside down, bulgy, strange, more than one, etc.

After your students see the reflection exhibits, which takes about one half hour, they will probably want to roam about the museum at their own pace to explore other things.

PROGRAMS AT THE EXPLORATORIUM

SCHOOL IN THE EXPLORATORIUM: The School in the Exploratorium (SITE) program provides an opportunity for a school class to pursue curriculum based on Exploratorium exhibits under the guidance of a staff instructor. San Francisco fourth through eighth grade public school classes spend three to five sessions in the museum studying physics and biology, using the underlying theme of patterns and perception. A Lending Library of props for experimenting, miniature replicas of Exploratorium exhibits, and complementary written materials has been created for teachers and students to take to school for follow-up activities in their classrooms.

For the past two years, the Exploratorium has invited professional artists (quilt maker, dancer, percussionist, painter, instrument maker, actor and director) to collaborate with the SITE staff in teaching and developing new curricula which inter-relate art and science. Together, they are exploring ways to sensitize students and teachers to the common bonds between art and science to enrich the way they perceive the natural world.

WORKSHOPS FOR TEACHERS: Exploratorium staff, in conjunction with U.C. Berkeley Extension and San Francisco State University Extension, offers courses during the spring and summer for elementary and middle school teachers. Using Exploratorium exhibits, classroom activities and props, teachers study concepts in light, vision, sound, hearing and perception. Credit is available for workshop participants.

DEMONSTRATION CONCERTS: In order to connect the physics of sound and the perception of sound with the artistry of sound, the Exploratorium arranges concerts throughout the year at which the musicians not only play but also demonstrate and discuss their instruments, their music and answer questions from the audience.

THE TACTILE GALLERY: The Exploratorium has one environment which will accomodate only about 15 people at once. A dark, thirteen chambered geodesic dome, the Tactile Gallery, with many levels and textures, is explored by using only the sense of touch. It is a very moving exhibit and enables people to get a sense of what it is like to feel and explore unknown territory. Reservations must be made as the dome is frequently booked several months in advance. There is a per person charge.

TEMPORARY EXHIBITS/FILMS: Special traveling science and art exhibits are displayed for periods of up to two months. These exhibits are broad ranging and reflect the breadth of the themes of the permanent collection. The Exploratorium regularly shows short films on weekends.

For more information about these programs, call 563-7337.

FIRE DEPARTMENT MUSEUM

The San Francisco Fire Department collections were stored at their present location since 1964 but the museum was not officially opened to the public until 1978. At this time the City Guide Volunteers, trained at the San Francisco History Room (Main Library), began staffing and offering free tours four afternoons a week. The museum is sponsored by the Saint Francis Hook and Ladder Society, a group of fire-fighters and others dedicated to preserving the fire-fighting heritage of San Francisco. The museum is supported entirely by donations and by the sale of gift items.

The Fire Department Museum has excellent collections of artifacts which can help teachers convey vividly the history of the city of San Francisco. Its collection of antique fire-fighting apparatus is especially exciting for students to see. The museum's document collection includes several thousand historic photographs of fires, firehouses and personnel. A horse harness, helmets and buffalo hose are part of the leather collection. These materials are used in changing displays grouped according to historic era. Display cases are devoted to artifacts, uniforms, badges and other memorabilia that represent different eras of Fire Department history - the volunteer days, 1850-1866; the era when horses pulled the City's engines, 1866-1922; and the overlapping motorized era, 1912 to the present. Other exhibits include a display about the 1906 disaster and a case devoted to the exploits and artifacts of Lillie Hitchcock Coit, the early fire buff whose bequest built Coit Tower and the Volunteer Firemen's Memorial statue. Another case is filled with equipment and memorabilia donated by former Chief of Department William Murray. A large case in the rear of the museum tells about the different kinds of fire hydrants students can see around the City.

It is often possible to visit Station 10, next door to the Fire Department Museum, to learn about modern fire fighting techniques and fire prevention.

Museum hours are Thursday, Friday, Saturday and Sunday, 1-4 p.m. Reservations must be made for tours.

655 Presidio Avenue
San Francisco, CA 94118
(415) 558-3981 or 431-7253
Contact: Judith Lynch

TEACHER INFORMATION FOR THE FIRE DEPARTMENT MUSEUM

Teachers are asked to explain to their students that they must not touch or climb on the engines in the museum because they are so old.

There is no restroom or water fountain at the Fire Department Museum.

A volunteer will be at the museum specifically for your class so be certain to call Judith Lynch or City Guides in plenty of time if you must cancel. You can reach her at 558-3981 or 431-7253 (home number). Each phone has an answering machine.

There must be at least three adults to accompany the children on this tour so please arrange for volunteers in advance.

Tours of the Fire Department Museum can be scheduled for Wednesday mornings at 10 or 11:00 a.m.

FORT FUNSTON - BAKER BEACH - LAND'S END

The Western edge of San Francisco includes the city's finest beaches and has its most natural landscape. The area has a long history of recreational use beginning with the first Cliff House in 1863, and later with the Sutro Baths. Much of the open space and scenic views along the coastline were at one time military coastal defense installations. In 1972 the entire Western shoreline of San Francisco was set aside as Park Land in the newly created GOLDEN GATE NATIONAL RECREATION AREA. The area is operated by the National Park Service and offers a great variety of recreational, scientific and cultural programs.

The outdoor setting provides an excellent opportunity to foster an awareness of the historical and physical environment of San Francisco. This is accomplished through ranger led nature and beach geology walks at Fort Funston and longer explorations along Baker Beach and Land's End. Other programs include historical walks through Sutro Heights and indoor slide presentations.

Teachers must call well in advance to make walk and slide show reservations. The Fort Miley Ranger Office administers the coastal area of the park and is open daily from 9-5:30 This is the South District of the GGNRA.

Fort Miley
c/o GGNRA
Fort Mason, Building 201
San Francisco, CA 94123
(415) 751-2519
Contacts: Dave Rung or Frank Dean

FORT FUNSTON - BAKER BEACH - LAND'S END

PROGRAMS OF THE GGNRA - SOUTH DISTRICT

WALKS

THE SANDS OF TIME - A Beach Geology Walk

A walk along a less visited portion of Ocean Beach to study coastal geology and how the land around us is formed. You will look at fossils, evidence of volcanic activity and go fault finding. The walk is approximately three miles (roundtrip) along the beach and requires a low tide. 1½ hours.

LITTORALLY SPEAKING - The Future of Ocean Beach

A philosophical and scientific look into the future of San Francisco's Ocean Beach. You will investigate the history of the area and assist park rangers in a new program that measures seasonal changes along the beach. The human impact on Ocean Beach will also be discussed, including the current wastewater treatment issue and general redevelopment plans. There will be a short hike along the beach. The approximate time for this trip is one hour.

LAND'S END - Exploring the San Francisco Headlands

The walk begins at Baker Beach with a look at the plants and animals living along the shoreline. Students will follow the course of Lobos Creek, San Francisco's last free flowing stream. A brief stroll through the Sea Cliff area brings you to the railroad grade of the historic Cliff House steam railroad, which you will follow past Deadman's Point, several visible shipwrecks along the coast and through the remainder of Land's End to the Sutro Baths area. This trip is approximately 3½ miles and will be covered in about 2 hours.

WALKING IN THE WIND - A Wind Energy Walk

As gas prices rise and smoke fills the skies, we will again look to the wind. At Fort Funston, one of the windier places in San Francisco, the role of wind in natural and human environments will be explored. Fort Funston, known for its hang gliders, is also the home of an electrical generating windmill, a fascinating dune environment and historic military structures. This walk is along one mile of level, paved trail (accessible to disabled visitors) and takes approximately 1½ hours.

FORT FUNSTON - BAKER BEACH - LAND'S END

PROGRAMS OF THE GGNRA - SOUTH DISTRICT

WALKS (Continued)

SUTRO BATHS AND SUTRO HEIGHTS

Historic walks through Sutro Heights and Sutro Baths at the Cliff House area provide an insight into the background and development of these areas into the most popular recreation attractions of their day. One of the world's largest indoor swimming pool complexes, and a garden estate overlooking the opulent Victorian Cliff House and Seal Rocks, were the achievements of one man, Adolph Sutro, a former mayor of San Francisco whose life will also be discussed. These walks can be combined into one longer program or can be taken separately. Each walk is approximately 1½ hours long. Sutro Heights is an easy, level walk and the Sutro Baths hike is along some steeper trails.

DEMONSTRATIONS

BATTERY CHAMBERLAIN - Baker Beach

Battery Chamberlain's six inch disappearing rifle at Baker Beach offers a glimpse into the past and the story of San Francisco's once formidable coastal defense system. The large gun is the only one of its type in the world that can still be maneuvered up and down in simulated gun drills and demonstrations. The adjacent museum provides a broader view of the former military defenses of San Francisco. The gun demonstration and talk by a park ranger is a 15 minute presentation and is usually part of a visit to Baker Beach or the Land's End hike.

CHINA BEACH AQUATIC DEMONSTRATION

Beach safety demonstrations and simulated aquatic rescues with National Park Service lifeguards and Zodiac surf boat operations are carried out at China Beach. The program takes an hour and is accessible to disabled persons.

SLIDE SHOWS

Indoor slide shows on beach safety, local natural history, and the Golden Gate National Recreation Area are available and usually are the focal point of hour-long ranger presentations on these subjects.

Call 751-1519 regarding any of the above programs.

FORT MASON

FORT MASON was originally a settlement of the Costanoan Indians. In 1775 Spanish explorers, led by Lieutenant Juan Manuel de Ayala, sailed into the Bay mapping and exploring. The following year a Spanish military post was established in the Presidio. The high bluff of Fort Mason, then called Punta Medanos (Sandy Point), was used as a lookout point.

The land at Fort Mason was reserved by President Millard Fillmore in 1850 for military use but was not immediately occupied by the military.

Squatters seeking home sites built houses on the land. The government evicted them during the Civil War when a detail of soldiers took possession on October 11, 1863. It was in 1882 that the post received its present name in honor of Colonel Richard Barnes Mason, Military Governor of California, 1847-1848. The docks were built from 1910-1912. Hungry and homeless people found refuge at Fort Mason after the earthquake and fire on April 18, 1906. Tents and food were supplied to them. During World War II Fort Mason was officially designated as the Port of Embarkation and controlled all military shipping of the West Coast and the Pacific. It continued to operate through the Korean War and into the 1960's. The piers were deactivated in 1963 as aircraft began playing a larger role in transporting troops and supplies. The Fort continued to function administratively and as an officers' residence community.

In 1972 Fort Mason became the National Park Service headquarters for GGNRA. Some of the historic homes built by the squatters in the 1850's can still be seen along Franklin Street. Today they are being used as housing for the military. There are also numerous Army buildings dating from before the turn of the century. There are lawns and gardens and a picnic area overlooking the Bay.

Bay and Franklin Streets
San Francisco, CA 94123
(415) 556-0560
Contact: Chief of Interpretation

PROGRAMS AT FORT MASON

Park Headquarters - Built in 1902 as a hospital, this brick building is now the headquarters of the Golden Gate National Recreation Area. A small information office with brochures on the park is just inside the front door. 556-0560.

Hostel - The San Francisco International Youth Hostel is located in the Civil War Barracks. Up to 130 travelers can stay overnight for \$4 to \$6 apiece, for up to three nights. Reservations advised. 771-7277.

Historic Houses - There are several charming 19th century structures, many built by squatters in the 1850's. The Park Service has placed descriptive plaques in front of the most historic dwellings.

Conversation Pace Course - This gamefield provides a way for senior citizens to get some exercise in this "walking circuit" game around upper Fort Mason.

SS Jeremiah O'Brien - This is the last of the unaltered "Liberty Ships" built for service in World War II. The vessel is open to the public every weekend. For more information, call Captain McMichaels at 441-3101.

Fort Mason Center - Most of the programs and attractions are administered by the Fort Mason Foundation. The Foundation leases space to more than 40 non-profit, tax-exempt organizations. Some 800 community groups have used Fort Mason for their programs. For a schedule of events at lower Fort Mason call 441-5706.

Picnic Grounds - A secluded picnic ground with barbecue pits is located behind the Youth Hostel, overlooking the Bay and Golden Gate Bridge. No reservations needed.

Self-Guided Walking Tour - A self-guided walk with seven "wayside" exhibit stations takes visitors through the Historic District of Fort Mason. The walk starts at the Officers' Club and takes you up Franklin Street, then down along the Promenade to Aquatic Park.

Great Meadow - This is a great place for kite flying, ball games, sunbathing, and strolling. The ships of the Marina sail in and out of port. There are 15 acres of lawn here.

FORT POINT NATIONAL HISTORIC SITE

The Fort Point National Historic Site was constructed during the years 1853-1861 and was used as a fortification of the Golden Gate until 1886 when the development of more advanced sea coast weapons made the old fort obsolete. During 1933-1937 the fort was used as a base of operation for the construction of the Golden Gate Bridge which now stands high above its roof. In 1970 the fort was declared a National Historic Site by the U.S. Congress and is now operated by the National Park Service. Fort Point is the only brick fort west of the Mississippi and is a classic example of sea coast fortifications of the 19th century.

The strategic setting at the Golden Gate makes the fort and its surroundings an excellent place to explore the natural environment and man's relationship with it through time. Educational programs include the guided Bay Marine and Headlands Ecowalks. Guided tours of Fort Point are conducted by Rangers dressed in replica Civil War uniforms. Students can take part in an authentic cannon drill. The tours stress early California history and Civil War history.

Teachers must call well in advance to make tour appointments. Fort Point is open daily from 10-5. The nearest bus line is #28 which will bring visitors within approximately one quarter mile of Fort Point. Passengers may leave the bus at the Golden Gate Bridge view area and then walk down the hill to the Fort.

The best tours can be conducted with groups of approximately 30 students or less. One adult to every 10 students is desirable.

Fort Point National Historic Site
P.O. Box 29333
Presidio of San Francisco, Ca. 94129
(415) 556-1693
Contact: Mia Monroe

PROGRAMS AT FORT POINT NATIONAL HISTORIC SITE

The Fort Point Explorers Program focuses on the historic fort and the surrounding natural area. An educational program has been designed at this site especially for schools and youth groups. The two to three hour program includes a guided tour of the historic fort, a discovery walk either along the shoreline or through the coastal bluffs, and related problem projects that are both fun and challenging. It has been developed to meet a variety of learning levels and special education needs and is adaptable to the teacher's existing curriculum.

THE FORT TOUR: a ranger, in full 1860's period soldier uniform, gives a guided tour of historic Fort Point. Tours of the fort normally cover the following main points:

- *Spanish-Mexican period
- *Establishment of Mission Dolores - 1776
- *Building of Spanish Fort (El Castillo de San Joaquin) - 1794
- *Mexico takes over Presidio and California -1821
- *Americans arrive - 1846
- *Fort Point constructed -1853
- *Fort Point history - 1853 to present

The group will visit the Fort museum exhibits and take part in a simulated firing of a Civil War cannon.

THE ECOWALK: a ranger gives a guided Ecowalk in one of two natural areas. Both clearly exhibit the natural world and man's inter-relationship with it through time. Each is outlined below with key concepts to be covered through observation, discussion, and activities.

Bay Marine Ecowalk

- * the changing beach - tides, waves, weather
- * the Bay as an estuary and harbor - the importance of the bay to our way of life and as a natural resource
- * the Bay shore - a look at the variety and complexity of plant and animal life; adaptation, habitats, food chains
- * fishing and wildlife conservation - crabfishing, water safety, basic rules, food chains
- * geology and weather of San Francisco Bay Area
- * water - waves, California watershed, tides, pollution
- * documentation techniques - plant or fish prints, journals, measurement, cinquain, poetry, compass use
- * energy and resource conservation

PROGRAMS AT FORT POINT NATIONAL HISTORIC SITE

Headlands Ecowalk

- *Fort Point's changing landscape through the eons - geology, native and exotic plants, natural and man-made features
- *seasonal changes and cycles and Indian uses of area
- *plant identification and soil study
- *orienteering and map/compass skills
- *engineering at the Golden Gate - Fort Point, lighthouses, and the Golden Gate Bridge
- *the view at the Golden Gate - military and early California history,
- *the harbor, the confluence of sea, river and land
- *Civil War Patrol Camp - the daily life of an 1860's soldier
- *energy and resource conservation

Choose the area for your group's Ecowalk and then select several key concepts. When you call to schedule your Fort Point Explorers Program the ranger will develop an individualized program for your group. A confirmation letter, an outline of this program and appropriate program materials will be sent for your review.

In addition to the above, present plans call for the Fort Point Environmental Interpretation Division to carry out a series of workshops on environmental subjects related to the Bay. Call Mia Monroe at 556-1693 for additional information.

The Historical Interpretation Division plans periodic Environmental Living Workshops. Teachers who want to participate in this program should contact Robert E. Lee at 556-1693 for specific details.

Other tentative events at Fort Point include a special Spanish Fiesta held in December and an annual 4th of July Turk Murphy concert and public picnic. Call the Fort Point office at the above number for exact information.

GALERIA DE LA RAZA

The GALERIA DE LA RAZA was started by a group of artists in 1970 as an alternative exhibition space. It was the first gallery of its kind in California. In 1976 the Galeria expanded to include Studio 24, a center for graphic design.

The Galeria de la Raza has provided a continuing series of art exhibitions of fine art and popular Hispanic arts. Its mural program has contributed to the beautification of the Mission District. It often has special exhibits such as the one on the theme of "El Dia de los Muertos" (The Day of the Dead).

The education program includes a Resource Center with archival materials on Chicano and Latino art and artists. These materials are available for study to teachers and students. Publications by the Galeria include a catalogue for their exhibit "Homage to Frida Kahlo". Curatorial Apprenticeships are open to artists. Their graphic arts training program is open to neighborhood youth. The Outreach Program includes a changing series of paintings on the Galeria's billboard as well as restoration of murals at the Mini-Park at 24th Street and York.

2851 24th Street
San Francisco, CA 94110
(415) 826-8009
Contact: Directors Ralph Maradiaga and Rene Yanez

PROGRAMS AT THE GALERIA DE LA RAZA

EXHIBITIONS: A major thematic exhibition is presented every 8-10 weeks, with an additional number of mini-shows and window displays in the community (restaurants, libraries, local businesses and community agencies).

CULTURAL EVENTS: Each year the Galeria has several cultural events to introduce new artists to their audience or to celebrate a holiday.

MURALS AND BILLBOARDS: A community outreach program was initiated by the Galeria in 1971 with the goal to improve the physical environment of the Mission District through murals in public places. There are more than 40 murals in the Mission District, most of which center on themes about the Latin-Chicano cultural heritage.

CLASSES AND WORKSHOPS: There are year-round adult evening classes and summer children's sessions. The classes and workshops include printmaking (etching, silk screen and color xerox), mural painting, batik, mask-making and paper cut-outs.

RESOURCE CENTER: Contains all historic documentation of the Galeria's programs in addition to documentation of the Hispanic Arts movement. The Resource Center is used by artists, students and teachers for research and general information.

Studio 24 is open Monday-Friday, noon-6 p.m.

Galeria de la Raza is open Thursday-Sunday, 1-6 p.m.

THE GOLDEN GATE NATIONAL RECREATION AREA

THE GOLDEN GATE NATIONAL RECREATION AREA was created by an Act of Congress. The GGNRA is the largest urban park in the world, and contains 36,000 acres of park lands, stretching along the San Francisco and Marin County coast lines.

A nearby National Park is a next door neighbor worth knowing. A visit to the Golden Gate National Recreation Area offers countless opportunities for exploration, education and just plain fun. The park's spectacular scenery, historic past, and natural qualities are an important part of San Francisco's magic.

Park Headquarters are located at Fort Mason. The Division of Interpretation provides maps and detailed information to teachers and community leaders on the GGNRA. Each month a special San Francisco Park Lands workshop is held to familiarize teachers and community people with the recreational and educational opportunities represented by the GGNRA. Workshops last an entire day and participants visit each district in the Park. They learn about the many programs available, how to make program reservations and anything else they need to know about the GGNRA.

If your class is interested in the GGNRA or the National Park Service, the Park can provide outreach service to visit classrooms. Various topics can be arranged with a minimum of two weeks notice.

Special programs in the Arts, Humanities and Environmental Education are offered through the Fort Mason Center located at lower Fort Mason. The Fort Mason calendar is distributed every month. Call 441-5705 for class and program information.

GGNRA
Fort Mason - Building 201
Bay and Franklin Streets
San Francisco, CA 94123
(415) 556-0560
Contact: Chief of Interpretation

JOSEPHINE D. RANDALL JUNIOR MUSEUM

The JOSEPHINE D. RANDALL JUNIOR MUSEUM first opened in 1937 and has been at its present location since 1951. Its purpose is to create an interest in life and the world around us. It is under the San Francisco Park and Recreation Department.

The Josephine D. Randall Junior Museum is an innovative center of "hands on learning". School children of all ages can participate in tours and classes that cover a broad spectrum of the arts and sciences. Tour subjects include natural history, marine life, earthquakes and volcanos, animal care, rocks and minerals, honey bees, mammals, weather, dinosaurs and San Francisco 100 years ago. Tours are offered during school hours and can be arranged on Saturdays. The museum also offers a total of 64 different after school and Saturday classes. Some of the more popular classes are: Computers, Model Boats, Junior Ceramics, Animal Care and Handling, and Science Fair Projects.

Located atop Corona Heights in the geographic heart of San Francisco, the museum has a large animal refuge center, an operating seismograph, a biology lab, a lapidary workshop, a fine wood and metal shop and computers in the Mandas Science Room.

The museum's main lobby has recently undergone a breathtaking renovation. The impressive skull of a California Grey Whale and an exhibit on whales now dominate the lobby's center. The sides of the lobby are graced by an interesting new exhibit on San Francisco 100 years ago and a beautiful mural of San Francisco's natural history.

The museum publishes a Teacher's Guide with valuable information on the programs available and suggestions. Call or write the museum for a copy of this Guide.

The #37 bus stops at Museum Way. Contact Muni for details. The hours are 10 a.m. - 5 p.m., Tuesday-Saturday.

199 Museum Way
San Francisco, CA 94114
(415) 863-1399
Contact: Steve Knotek and John Dillon

THE MEXICAN MUSEUM

THE MEXICAN MUSEUM, first of its kind outside of Mexico, opened its doors on November 20, 1975, after five years of preparatory work by Peter Rodriguez, its founder and executive director.

The primary goal of The Mexican Museum is to foster a greater awareness of Mexican and Mexican American art and culture. Exhibitions cover five areas: 1) Pre-Hispanic Art 2) Colonial Art 3) Mexican Fine Arts 4) Mexican American Fine Arts and 5) Folk Art. Traditional celebrations, such as El Cinco de Mayo (Fifth of May) and El Dia de los Muertos (Day of the Dead), are celebrated with special exhibits and activities.

The museum's Education Department conducts tours as well as in-museum and outreach workshops in traditional folk arts and dance for persons of all ages. Instructional slide and artifact kits are available for rent.

The permanent collection includes a core group of pre-Hispanic ceramics, Colonial sculpture and paintings, a large assemblage of folk art, primarily ceramics and representative work of contemporary Mexican and Mexican-American artists.

The museum is open Tuesday-Sunday, 12 noon to 5 p.m. It is closed on Mondays and holidays.

1855 Folsom Street
San Francisco, CA 94103
(415) 621-1224
Contact: Nora Wagner

PROGRAMS AT THE MEXICAN MUSEUM

The exhibitions program at the Mexican Museum draws from five areas of Mexican and Mexican American art: Pre-Hispanic, Colonial, Folk, Mexican Fine Arts and Mexican American Fine Arts. Traditional fiestas, such as the Fifth of May and the Day of the Dead are commemorated with special exhibits. Educational tours conducted in English, Spanish or both, elaborate on the exhibits. The Education Department has in-museum and outreach art and dance programs for students, teachers and community groups and arranges guided tours of the nearby Mission District murals.

LECTURES: Lectures are offered at regular intervals throughout the year. Visiting lecturers cover a wide spectrum of topics relating to Mexican art, history and culture. Please call for specific information.

WORKSHOPS: The museum staff is available to conduct workshops with slide presentations at schools and for community groups. The following three themes represent areas on which workshops and slide shows are conducted: clay, paper and dance. There is a minimum fee of \$100 for groups of 75 or under with a \$1.00 fee for each additional participant.

KITS: Educational kits may be checked out and kept for two weeks. There are artifact kits designed to be used as mini-exhibits based on Mexican folk art. Exhibit pieces are documented as to their origins, processes and use within their cultural context. There are also slide kits which focus on various themes on Mexican art and culture as well as the Mission District murals.

MISSION DOLORES

MISSION DOLORES was established as the Mission of San Francisco de Asis in 1776. Of the 21 California Missions this is the third most northerly and the sixth to be established.

The Mission, completed in 1791, is the oldest intact building in San Francisco. The ceiling, although repainted, depicts original Indian designs which had been done with vegetable dyes. The altar and some of the statues came from Mexico in the early 1800's. The Basilica was destroyed during the 1906 earthquake and was rebuilt in 1918. The Museum was established in 1976. Artifacts shown here include a copy of a document containing the signature of Father Junipero Serra, father of the California missions. Burials in the Cemetery took place from the earliest days of the Mission until the 1890's. The Cemetery contains graves of many early San Francisco notables including Francisco de Haro, first Mayor of San Francisco and Don Luis Antonio Arguello, first Governor of California under the Mexican government and a native San Franciscan. There is also a general grave dedicated to the "Forgotten Dead".

Dolores at 16th Street
San Francisco, CA 94114
(415) 621-8203
Contact: George Martinez

MUSEO ITALO AMERICANO

The MUSEO ITALO AMERICANO (the Italian American Museum) opened its doors on August 17, 1978. The Museo was envisioned by Archeoclub d'Italia's president, Giuliana Nardelli Haight. The idea captured the imagination of men like Franco Bruno, who donated the space, and Dr. Mark Luca, who helped to turn the dream into a reality.

The purpose of the Museo Italo Americano is to display archeological and art treasures and to foster educational programs for the appreciation of Italian-American art, history and culture. There is a chronological time-line of the cultural heritage of Italy including original art and archeological works (e.g. an intact vase circa 600 B.C. and shards from ancient cities, 800 B.C. - 300 A.D.); a large map of Italy and its regions; maps of the United States and the Bay Area with Italian immigration centers; and changing exhibits of contemporary art by artists of the Bay Area, the United States and Italy.

The Education Department of the Museo Italo Americano offers a wide array of classes. The staff conducts tours for students of all ages and works with the outreach programs of various institutions.

The Museo Italo Americano is open Wednesday - Sunday, 12 noon - 5 p.m.

678 Green Street
San Francisco, CA 94133
(415) 398-2660

Contacts: Paola Bagnatori, Director of Education
Paula Weiss, Coordinator of Education

PROGRAMS AT THE MUSEO ITALO AMERICANO

The museum staff, in cooperation with the San Francisco Unified School District, has developed a program of cultural enrichment for interested groups. Lectures, workshops, slide shows, and tours are presented on Italian and Italian-American culture. Organizations interested in scheduling presentations should contact the Museo. A kit containing visual aids is available for check-out from the Museo on request. A check out library is also available. A complete instructional packet is available for classroom teachers. This packet contains background information on Italian and Italian-American culture, maps, charts, posters, film strips, cassettes and task cards.

There is a wide array of in-museum classes available. Some of these have been in Italian Conversation, Beginning Italian, The Venetian Masters, the Italians in San Francisco and Archaeological Italy. Call the Museo for a complete schedule of classes, lectures and special events, 398-2660.

NATIONAL MARITIME MUSEUM AND HYDE STREET PIER

THE NATIONAL MARITIME MUSEUM is a unit of the National Park Service and is operated as part of the Golden Gate National Recreation Area. Both the museum and Hyde Street Pier began as a proposal in the late 1940's, and a citizen's committee began when the Maritime Museum Association was established in 1950. The museum opened its doors to the public in 1951.

In 1955, the Federal Government gave up its claim to royalties from the development of oil-bearing tidelands and returned the money to the state of California. San Francisco received \$2,000,000. It was proposed that the money be used to expand the museum into a state historical monument. The San Francisco Maritime State Historic Park was opened October 3, 1963 as a joint project of the Maritime Museum Association and the State Division of Beaches and Parks.

The National Maritime Museum includes the Maritime Museum Building at the foot of Polk Street; the Aquatic Park and Beach Area; the Hyde Street Pier with its five historic vessels and the Balclutha, a three masted square rigger, at Pier 43½ (Powell Street).

GGNRA

Fort Mason

San Francisco, CA 94123

(415) 556-2904 - National Maritime Museum

(415) 556-6435 - Hyde Street Pier

Contacts: John Gruver, Maritime

Dave Nettell, Hyde Street

PROGRAMS AT THE NATIONAL MARITIME MUSEUM AND HYDE STREET PIER

At the NATIONAL MARITIME MUSEUM students will explore the seafaring vessels and stories that influenced the Pacific Coast's development. Meticulously built ship models and large ship relics dominate the first floor. Carved and painted figureheads stare into space. The second floor, identified as the Old Waterfront, has a fascinating collection of photographs, ship models, paintings, maps and samples of sailors' handicrafts. This is one of the most extensive maritime artifact collections in the country. The hours are 10 a.m. to 5 p.m. daily.

Five ships are at the HYDE STREET PIER. They all played a significant part in Pacific Coast maritime history. Each is fully restored to near original condition and they are all afloat. The C.A. Thayer, a three-masted, 1895 schooner, is typical of the ships built to carry lumber. The Wapama, a 1915 steamer built of wood, carried both lumber and passengers between Pacific Coast ports. The Eureka, a side-wheel ferry boat that spent most of her life on San Francisco Bay, carried commuters - as many as 2,300 at one time - autos and trucks. Until the bridges were opened in 1936 and 1937, the ferries were the only means of public transportation across the Bay. These three ships can be boarded. The Alma is a scow schooner, one of the unglamorous work boats on the Bay and rivers whose principal cargo was hay. The Alma is the only surviving scow schooner still afloat. The Hercules is an ocean-going steam tug. These two ships can be seen from dockside. The hours are 10 a.m. to 5 p.m. daily (until 6 p.m. during Daylight Savings Time).

OAKLAND MUSEUM

THE OAKLAND MUSEUM, dedicated to the theme of California, has three distinct permanent exhibitions which explore the historic, artistic, and ecological heritage of the region. Now entering its second decade this museum is the place where visitors can see the nation's most populous and diverse state in microcosm.

In addition to the museum's permanent installations, a schedule of special changing exhibitions and a variety of education programs are offered throughout the year. The Indian Life Tours visit the Art, History, and Natural Sciences Galleries and end with a hands-on experience grinding acorns, working a bow drill and doing other Native American activities. Six California Families Tours in the History Gallery examines the lives and experiences of settlers who came to establish new homes for themselves in California.

The Gallery of California Art offers specialized tours which focus on such diverse topics as sculpture, portraiture, and the Gold Rush. Music in the Museum Programs presented by the Oakland Symphony Discovery Ensembles are offered throughout the school year. A variety of multi-media presentations can be scheduled for classes visiting the museum.

To reserve a gallery tour, call 273-3514. Special teacher workshops can be arranged by calling 273-3006.

The Oakland Museum is open Tuesday to Saturday 10 a.m.-5 p.m. and Sunday from 12 noon -7 p.m. The museum is located two blocks from the Lake Merritt Bart Station.

1000 Oak Street
Oakland, CA 94607
(415) 273-3514
Contact: Dorothy Harrington

OLD MINT MUSEUM

The first United States Mint in San Francisco opened its doors on Commercial Street in 1854. The small building, just 60 feet square, quickly became inadequate to meet the expanding coinage demands of the region. The new Mint at 5th and Mission was occupied in the summer of 1874 and was one of the best appointed mints in the world. Minting operations were moved to another building in 1937. The old building was authentically restored and opened to the public in 1973 as the Old Mint Museum. The building, with its massive vaults and the counting rooms surrounded by balconies for armed guards, provides a dynamic backdrop for the history of the cultural and economic life of California and the West.

The collection includes a gold bar display that is 999.9 pure and worth well over a million dollars, a restored 1869 coin press, coins from various times and places, Victorian furnishings in several restored rooms, Western paintings, a Wells Fargo stagecoach, an 1893 fire engine, photographs, old firearms, Edison talking machines, a replica of a miner's cabin and mechanical banks.

Part of the tour will include viewing the film "The Granite Lady" narrated by the actress Mercedes McCambridge. The action of the film starts with the discovery of gold through economic growth, earthquake and fire, and the abandonment and rescue of the Old Mint.

There is no admission charge and guided tours and printed literature are provided at no cost. The film is shown every hour on the half hour (9:30-2:30). The museum is open Tuesday through Saturday, 9 a.m. to 4 p.m.

Fifth and Mission Streets
San Francisco, CA 94103
(415) 556-3630
Contact: Olga Melko

PRESIDIO ARMY MUSEUM

THE PRESIDIO ARMY MUSEUM is located in an 1863 army hospital building. The Presidio Army Museum was founded in July, 1973. It was created by the United States Army to tell the relationship and the role of the United States Army to San Francisco and the Bay Area; the Western migration after the Gold Rush; the Pacific Expansion during the Spanish-American War; and the United States Army in World War II, Korea and Vietnam.

The museum has approximately 12,000 square feet of display area. The primary interest is to present the following historic areas:

- The coastal Native American Indian
- The founding of the Presidio
- The Spanish and Mexican Periods
- The American Period
- The Gold Rush
- The earthquake and fire
- Conflicts of the 1900's and more

The Presidio Army Museum also has an extensive exhibit on the natural and ecological history of the Presidio, a large gallery for temporary exhibits and various audio visual and media presentations. Guided tours of the museum are available for groups and last about 45 minutes.

Museum hours are 10 a.m.- 4 p.m., Tuesday through Sunday.

Lincoln at Funston
Presidio
San Francisco, CA 94122
(415) 561-4115
Contact: Kim Combs

SAN FRANCISCO AFRICAN AMERICAN HISTORICAL AND CULTURAL SOCIETY

THE SAN FRANCISCO AFRICAN AMERICAN HISTORICAL AND CULTURAL SOCIETY was founded in 1955 by James Herndon and Frances Miller. In 1970 the Society moved from a storefront on Fillmore Street to its present location on McAllister Street.

The Society has a library, an archive room, a large gallery for changing exhibits and a smaller museum room which features works related to Blacks in the West.

From its inception the Society's purposes have been:

- to promote an understanding of the role people of African descent have played in world history

- to collect a library of materials depicting and recording the contributions made by people of African descent to world history and culture

- to establish and maintain a cultural center in San Francisco.

The Society's educational program is designed to make its materials and knowledge concerning people of African descent available to the public. Some aspects of the educational program are: the J.B. Sanderson History Club of Senior Citizens, The African Affairs Committee that sponsors monthly speakers, a poetry program that includes Black Writers' Workshops twice a week, weekly open poetry readings, and monthly readings by nationally known poets.

Tours of the library, museum, art gallery and field programs are available to the public with reservations and for a modest fee.

680 McAllister Street
San Francisco, CA 94102
(415) 864-1010
Contact: Ricky Moss or Monica Scott

SAN FRANCISCO MUSEUM OF MODERN ART

THE SAN FRANCISCO MUSEUM OF MODERN ART traces its origins to exhibitions held by the San Francisco Art Institute (formerly the S.F. Art Association) in the 1870's. In 1916 the Art Institute established the museum in the Palace of Fine Arts, which had been the art center of the Panama Pacific International Exposition of 1915. It was incorporated as an independent, non-profit organization in 1921.

Since 1935 the museum has been at its present location, actively contributing to the understanding and acceptance of new forms of 20th century art. The permanent collection is primarily made up of paintings, sculpture and photographs created after 1900. SFMMA was the first museum in the West to give gallery talks as part of its regular program and among the first in the country to recognize film as an art form. Film exhibitions and the performing arts are integral to the museum's programs. SFMMA was first to use the medium of television to bring new arts to a wider audience.

The typical SFMMA experience for an elementary school group begins with a slide presentation in the classroom guaranteed to stimulate a lively docent led discussion. An art project related to the slide show follows. Approximately one week later the class visits the museum and is divided among a team of docents. They explore an exhibition in small groups and participate in one or more art projects inspired by the works of art being investigated.

For additional information and/or to arrange a tour, please call the Education Department at the museum.

Van Ness Avenue at McAllister Street
San Francisco, CA 94102
(415) 863-8800
Contact: Miriam Grunfeld

PROGRAMS AT SAN FRANCISCO MUSEUM OF MODERN ART

The in-school presentations and school tours described on the SFMMA cover page are the only activities currently offered that are geared to the elementary school child specifically.

Docent-led tours of special exhibitions and/or the permanent collection are offered daily at 1:15 p.m. Special tours can be arranged for a small fee and may be tailored to the needs and interests of any group. Contemporary music concerts are a regular feature of the museum's program. Lectures, symposia, and films frequently complement ongoing exhibitions. All such events are described in the museum's bi-monthly Calendar.

THE SAN FRANCISCO ZOO

The San Francisco Zoo began in 1889 with a Grizzly Bear, "Monarch", who was exhibited first at Woodward's Gardens and later in Golden Gate Park. In the following years, other bears, goats, elk and bison were exhibited in the park meadows. The zoo was moved to its present location in the mid-1920's and was greatly enlarged under the Works Progress Administration during the 1930's. The next major construction took place in the 1960's when the ape grottos, giraffe barn and small cat enclosures were completed. Revenue from admission fees, charged since 1970, made possible the building of a much needed animal hospital in 1974. In 1977 a federal grant of two million dollars financed the construction of Wolf Woods (1978), Musk Ox Meadow (1980) and Gorilla World (1980). Private funding will make it possible for construction of a new small monkey exhibit to begin in 1981. Each of these new areas provide the animals with a healthy and naturalistic living space that reflects our knowledge of the latest developments in animal habitat improvement research.

The San Francisco Zoological Society was established in 1954 as a non-profit membership organization dedicated to improving the San Francisco Zoo. It provides fundraising, advertising, public information and educational services for the zoo. The Zoological Society does not receive any public tax monies, but funds all of these programs with revenue generated by its concession stands and fundraising efforts.

The Zoological Society's education programs began with the founding of the Docent Council in 1969. Today over 100 volunteer guides tour 15,000 adults and children through the zoo annually. The ZooMobile, a program that transports live animals into Bay Area classrooms, is entering its seventh year and serves 10,000 children annually. Summer classes, special lectures and seminars are all part of the Education Office's efforts to inform the public about the very special treasures housed at the San Francisco Zoo.

The zoo is open from 10-5 daily.

Zoo Road and Skyline Blvd.
San Francisco, CA 94132
(415) 661-2023

Contact: Brandy Pound, Director of Education

PROGRAMS AT THE SAN FRANCISCO ZOO

The SAN FRANCISCO ZOO has a collection of over 300 species of birds and mammals. The barnyard in the Children's Zoo allows close contact and viewing of a variety of domestic animals such as geese, goats, sheep, pigs, horses and chickens. It has often been for the sake of these domestic stock that more exotic species have lost their natural habitats. A lively discussion of the causes of endangerment usually follows the juxtaposing of wild and domestic animals in a single tour. The Zoo can create custom tours for your class.

In addition to the guided tours, the Zoo also offers other services:

TEACHER WORKSHOPS: The Zoo as a Curriculum Resource is given twice a year to provide teachers with the necessary fundamental science to feel comfortable with animal studies. It includes a ZooMobile presentation, suggestions and materials for a wildlife unit and a tour of the Zoo. Call the Zoo for dates and details.

ZOO-mobile: The ZooMobile uses live animals to teach children fundamental concepts of wildlife conservation and appreciation. Zoo-Mobile offers six different programs to augment your curriculum in environmental science. They will send you a brochure describing each of the lessons and explaining just how ZooMobile works. Free materials have been prepared for teachers whose classes participate in the ZooMobile program. These materials include enrichment activities, vocabulary lists and bibliography that will assist you in planning your animal studies unit.

INSECT ZOO: The Insect Zoo is located inside the Children's Zoo. It is arranged to be a self-guided experience. Special talks by the entomologist on duty can be arranged by appointment. Bug Club meets the second Saturday of each month. If you bring a bug you get free admission to the Children's Zoo.

SUMMER STUDIES: There are a dozen different classes for children ages 4 and up on a variety of animal related subjects. The Monkey Morning Club offers weeklong sessions for ages 6-9 from 9 a.m. to noon. A brochure describing all summer classes may be obtained by calling (415) 661-2023.

STRYBING ARBORETUM

STRYBING ARBORETUM and Botanical Gardens were established in 1937 though the plan for an arboretum goes back to the 19th century beginnings of Golden Gate Park. Like all other museums, an arboretum has permanent collections to be studied and enjoyed by the public. The main difference is that the collections are living!

Although the San Francisco climate enables the arboretum to grow a wide variety of individual and collective planting from all over the world, it tends to specialize in those from the areas of the world with a Mediterranean climate (cool, wet winters and hot, dry summers) - Australia, South Africa, South America, the Mediterranean and, of course, coastal California.

Other major collections are the Asiatic magnolias, rhododendrons and conifers. There are also special gardens like the Japanese Moon-viewing Garden and the Garden of the Senses.

Slides with an accompanying teacher's guide are loaned before each visit. Specially trained docent guides lead the walks which average about 1½ hours. They try to keep the ratio of guides to children as small as possible. Requests should be phoned at least two weeks in advance to the Education Coordinator.

Daily tours are given to the public at 1:30 and additionally at 10:30 a.m. Thursday through Sunday. They meet at the kiosk information booth inside the main gates where books and other items are for sale. All these activities are sponsored by the Strybing Arboretum Society which also maintains a non-circulating horticultural reference library.

9th Avenue at Lincoln Way
Golden Gate Park
San Francisco, CA 94122
(415) 661-1316
Contact: Education Coordinator

PROGRAMS AT THE STRYBING ARBORETUM

Strybing Arboretum, in the heart of Golden Gate Park, offers a selection of Nature Trails for grades 3-12. One enters a different world beyond the main gates of this incredibly beautiful section of the Park. This is not your usual field trip. The Education Office of the Strybing Arboretum Society prefers that it be called an Outdoor Classroom and there is preparatory material (text and slides) on loan. Specially trained docent guides help the children discover the wonders of nature, whether it be watching a humming bird drink nectar from a fuchsia or washing one's hands, as once did the California Indians with suds from the flowers of the wild lilac.

Since the Arboretum has the added excitement of seasonal changes, the collections are never static, and the Nature Walks are designed around the seasons:

Fall PLANT TRAVELERS How plants survive by intriguing ways of dispersing seeds. (Grades 3-12)

REDWOOD TRAIL A unique example of a plant community in our coastal area. With different emphases, this trail is instructional all year round. (Grades 4-12)

Winter CONIFER WALK How to tell the difference between conebearing and flowering plants, how to identify the more common conifers in the Bay Area and the importance of several of these trees in the development of Golden Gate Park. (Grades 7-12)

REDWOOD TRAIL (Clothed in the serene green of winter)

Spring REDWOOD TRAIL (Alive with the first blooms of spring)

WALK IN CALIFORNIA Starting with the coastal strand and moving inland to the valley grassland, this walk concentrates on the habitats the students are most likely to experience. (Grades 4-12)

FLOWER WALK Flowers and their pollinators show the exciting adaptation by insects and birds to the specialized flowers they pollinate. (Grades 3-12)

TEMPLE EMANU-EL

The Jewish settlement in California dates back to Gold Rush days. Jewish pioneers held their first religious service on the shores of San Francisco in 1849. One year later a congregation was formed under the leadership of Emanuel Berg. In his honor the congregation was named EMANU-EL - "GOD is with us." Two Temple buildings preceded present Temple Emanu-El which was dedicated in 1926.

The architecture of Temple Emanu-El is Levantine. A visitor enters the Temple though an archway which opens into a courtyard. In the center of this courtyard is a fountain - a reminder of the ancient Fountain of Oblation in the Temple Court in Jerusalem. The symbols in the mosaic floor represent the twelve tribes of Israel. The two huge stained glass windows which face each other in the sanctuary are called "Fire" and Water," symbolizing the two mystical elements of creation. Designed by San Francisco artist Mark Adams, each window is created from 2000 pieces of glass and comprises a spectrum of over 200 radiant colors. The windows were installed in the summers of 1972 and 1973. The sanctuary tapestries are centered on the six-pointed Star of David and the Tetragrammaton (the four letter unpronounceable Name of GOD).

The Elizabeth S. Fine Museum is housed in Temple Emanu-El. The collection includes artifacts, sacred objects, lithographs, watercolors and paintings. Artists in various media have shows in the museum several times a year.

Concerts and lectures are given at the Temple.

The Elizabeth S. Fine Museum is open daily during the week and on Saturday and Sunday mornings. Guided tours of the Temple buildings may be arranged.

Arguello and Lake
San Francisco, CA 94118
(415) 751-2535
Contact: Tirtza Rosenberg

